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Search Results -

Terms	Documents
L2 and (website or web with site or web-site)	61

Database: US Patents Full-Text Database; US Pre-Grant Publication Full-Text Database; JPO Abstracts Database; EPO Abstracts Database; Derwent World Patents Index; IBM Technical Disclosure Bulletins

Search: Refine Search

Recall Text | Clear

Search History

DATE: Sunday, March 23, 2003 Printable Copy Create Case

Set Name side by side	Query	Hit Count	Set Name result set
DB=USPT,PGPB,JPAB,EPAB,DWPI,TDBD; PLUR=YES; OP=OR			
L3	L2 and (website or web with site or web-site)	61	L3
L2	L1 and (web near page or internet near page)	80	L2
L1	securities near trading	435	L1

END OF SEARCH HISTORY

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Search Results -

Terms	Documents
L5 and (web near page or internet near page)	79

Database: US Patents Full-Text Database; US Pre-Grant Publication Full-Text Database; JPO Abstracts Database; EPO Abstracts Database; Derwent World Patents Index; IBM Technical Disclosure Bulletins

Search: Refine Search

Recall Text | Clear

Search History

DATE: Sunday, March 23, 2003 Printable Copy Create Case

Set Name side by side	Query	Hit Count	Set Name result set
DB=USPT,PGPB,JPAB,EPAB,DWPI,TDBD; PLUR=YES; OP=OR			
L6	L5 and (web near page or internet near page)	79	L6
L5	L2 and (internet or www)	252	L5
L4	L3 and (web near page or internet near page)	22	L4
L3	L2 and internet-based	41	L3
L2	securities near trading	435	L2
L1	internet-based near securities near trading	4	L1

END OF SEARCH HISTORY

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Search Results -

Terms	Documents
L20 and order near prefer$	8

Database: US Patents Full-Text Database
US Pre-Grant Publication Full-Text Database
JPO Abstracts Database
EPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

Search: Refine Search

Recall Text Clear

Search History

DATE: Sunday, March 23, 2003 Printable Copy Create Case

Set Name side by side	Query	Hit Count	Set Name result set
DB=USPT,PGPB,JPAB,EPAB,DWPI,TDBD; PLUR=YES; OP=OR			
L21	L20 and order near prefer$	8	L21
L20	L1 and default near values	37	L20
DB=USPT; PLUR=YES; OP=OR			
L19	6119944.pn.	1	L19
L18	5955719.pn.	1	L18
DB=USPT,PGPB,JPAB,EPAB,DWPI,TDBD; PLUR=YES; OP=OR			
L17	L16 and default same values	3	L17
L16	L15 and securitie$ same order	32	L16
L15	L14 and (web near page or internet near page)	70	L15
L14	l1 and (internet or www or web)	257	L14
L13	l1 and candlestick	3	L13
DB=USPT; PLUR=YES; OP=OR			
L12	5963923.pn.	1	L12
L11	5963923.pn.	1	L11
DB=USPT,PGPB,JPAB,EPAB,DWPI,TDBD; PLUR=YES; OP=OR			
L10	L9 and trail$ same stop	0	L10
L9	L8 and stop same loss same price	5	L9
L8	L7 and indicator	62	L8
L7	l1 and limit same price	149	L7
L6	l1 and limit same price same indicator	1	L6
L5	l3 and limit same price same indicator	0	L5
DB=USPT; PLUR=YES; OP=OR			
L4	4064490.pn.	1	L4
DB=USPT,PGPB,JPAB,EPAB,DWPI,TDBD; PLUR=YES; OP=OR			
L3	L1 and lot near indicator	2	L3
L2	L1 and trail$ with stop with price	1	L2
L1	securities near trade$	432	L1

END OF SEARCH HISTORY

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Search Results - Record(s) 1 through 3 of 3 returned.

☐ 1. Document ID: US 20020120551 A1

L13: Entry 1 of 3 File: PGPB Aug 29, 2002

PGPUB-DOCUMENT-NUMBER: 20020120551
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020120551 A1

TITLE: Visual-kinesthetic interactive financial trading system

PUBLICATION-DATE: August 29, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Jones, Clarkson III	Charlotte	NC	US	

US-CL-CURRENT: 705/37; 705/36

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments KWIC | Draw Desc | Image

☐ 2. Document ID: US 20010049651 A1

L13: Entry 2 of 3 File: PGPB Dec 6, 2001

PGPUB-DOCUMENT-NUMBER: 20010049651
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20010049651 A1

TITLE: Global trading system and method

PUBLICATION-DATE: December 6, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Selleck, Mark N.	Jersey City	NJ	US	

US-CL-CURRENT: 705/37; 705/26, 705/27, 705/36

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments KWIC | Draw Desc | Image

☐ 3. Document ID: US 6272474 B1

L13: Entry 3 of 3 File: USPT Aug 7, 2001

US-PAT-NO: 6272474
DOCUMENT-IDENTIFIER: US 6272474 B1

TITLE: Method for monitoring and trading stocks via the internet displaying bid/ask trade bars

DATE-ISSUED: August 7, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Garcia; Crisostomo B.	Rancho Santa Fe	CA	92067	

US-CL-CURRENT: 705/37; 705/35, 705/36

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

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Terms	Documents
l1 and candlestick	3

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Search Results - Record(s) 1 through 5 of 5 returned.

☐ 1. Document ID: US 20030009411 A1

L9: Entry 1 of 5 File: PGPB Jan 9, 2003

PGPUB-DOCUMENT-NUMBER: 20030009411
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20030009411 A1

TITLE: Interactive grid-based graphical trading system for real time security trading

PUBLICATION-DATE: January 9, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Ram, Pranil	Toronto		CA	
Almodovar, Crispin M.	Makati City		PH	

US-CL-CURRENT: 705/37; 705/36

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWC | Draw Desc | Image

☐ 2. Document ID: US 20030004853 A1

L9: Entry 2 of 5 File: PGPB Jan 2, 2003

PGPUB-DOCUMENT-NUMBER: 20030004853
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20030004853 A1

TITLE: Graphical front end system for real time security trading

PUBLICATION-DATE: January 2, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Ram, Pranil	Toronto		CA	
Almodovar, Crispin M.	Makati City		PH	

US-CL-CURRENT: 705/37

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWC | Draw Desc | Image

☐ 3. Document ID: US 20020156722 A1

L9: Entry 3 of 5 File: PGPB Oct 24, 2002

PGPUB-DOCUMENT-NUMBER: 20020156722
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020156722 A1

TITLE: Automated securities trading system

PUBLICATION-DATE: October 24, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Greenwood, Ken M.	Westminster	MD	US	

US-CL-CURRENT: 705/37

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Image

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☐ 4. Document ID: US 20020147670 A1

L9: Entry 4 of 5 File: PGPB Oct 10, 2002

PGPUB-DOCUMENT-NUMBER: 20020147670
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020147670 A1

TITLE: Digital options having demand-based, adjustable returns, and trading exchange therefor

PUBLICATION-DATE: October 10, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Lange, Jeffrey	New York	NY	US	

US-CL-CURRENT: 705/35; 705/37

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments KWIC | Draw Desc | Image

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☐ 5. Document ID: US 6247000 B1

L9: Entry 5 of 5 File: USPT Jun 12, 2001

US-PAT-NO: 6247000
DOCUMENT-IDENTIFIER: US 6247000 B1

TITLE: Method and system for confirmation and settlement for financial transactions matching

DATE-ISSUED: June 12, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hawkins; John G.	Westfield	NJ		
Jacobs; Dave M.	Wayne	NJ		
Fitzpatrick; Rick	Rockaway	NJ		

US-CL-CURRENT: 705/37

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments KWIC | Draw Desc | Image

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Terms	Documents
L8 and stop same loss same price	5

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Search Results - Record(s) 1 through 8 of 8 returned.

☐ 1. Document ID: US 20020091637 A1

L21: Entry 1 of 8 File: PGPB Jul 11, 2002

PGPUB-DOCUMENT-NUMBER: 20020091637
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020091637 A1

TITLE: Systems and methods for administering return sweep accounts

PUBLICATION-DATE: July 11, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Bent, Bruce	Plandome	NY	US	
Bent, Bruce II	New York	NY	US	

US-CL-CURRENT: 705/40

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments KWIC | Draw Desc | Image

☐ 2. Document ID: US 20020091617 A1

L21: Entry 2 of 8 File: PGPB Jul 11, 2002

PGPUB-DOCUMENT-NUMBER: 20020091617
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020091617 A1

TITLE: Trading program for interacting with market programs on a platform

PUBLICATION-DATE: July 11, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Keith, Christopher	New York	NY	US	

US-CL-CURRENT: 705/37

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments KWIC | Draw Desc | Image

☐ 3. Document ID: US 20020052827 A1

L21: Entry 3 of 8 File: PGPB May 2, 2002

PGPUB-DOCUMENT-NUMBER: 20020052827
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020052827 A1

TITLE: Method for directing and executing certified trading interests

PUBLICATION-DATE: May 2, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Waelbroeck, Henri	Scarsdale	NY	US	
Federspiel, Fred J.	Larchmont	NY	US	
Angel, James J.	Arlington	VA	US	

US-CL-CURRENT: 705/37; 705/26

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments KWIC | Draw Desc | Image

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☐ 4. Document ID: US 20010051909 A1

L21: Entry 4 of 8 File: PGPB Dec 13, 2001

PGPUB-DOCUMENT-NUMBER: 20010051909
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20010051909 A1

TITLE: Market program for interacting with trading programs on a platform

PUBLICATION-DATE: December 13, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Keith, Christopher	New York	NY	US	

US-CL-CURRENT: 705/37; 705/26

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments KWIC | Draw Desc | Image

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☐ 5. Document ID: US 20010044770 A1

L21: Entry 5 of 8 File: PGPB Nov 22, 2001

PGPUB-DOCUMENT-NUMBER: 20010044770
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20010044770 A1

TITLE: Platform for market programs and trading programs

PUBLICATION-DATE: November 22, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Keith, Christopher	New York	NY	US	

US-CL-CURRENT: 705/37

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments KWIC | Draw Desc | Image

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☐ 6. Document ID: US 20010042040 A1

L21: Entry 6 of 8 File: PGPB Nov 15, 2001

PGPUB-DOCUMENT-NUMBER: 20010042040
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20010042040 A1

TITLE: Routing control for orders eligible for multiple markets

PUBLICATION-DATE: November 15, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Keith, Christopher	New York	NY	US	

US-CL-CURRENT: 705/37

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments KWIC | Draw Desc | Image

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☐ 7. Document ID: US 20010003179 A1

L21: Entry 7 of 8 File: PGPB Jun 7, 2001

PGPUB-DOCUMENT-NUMBER: 20010003179
PGPUB-FILING-TYPE: new-utility
DOCUMENT-IDENTIFIER: US 20010003179 A1

TITLE: On-line transaction processing system for security trading

PUBLICATION-DATE: June 7, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Martyn, Peter	Ridgewood	NJ	US	
DeNat, Mark	Bedford	NY	US	
Hall, Diane Geberth	Larehmont	NY	US	
Slomowitz, Ira	Saba	NJ	IL	
Franke, Maureen	Jersey City	NJ	US	
Pang, Mei	West Orange	CT	US	
Flynn, Edward	Newtown	CT	US	
Waldo, Michael	Danberry	CT	US	
Sweet, Pamela	Beacon Falls	CT	US	
Coords, Deane	Woodbridge		US	

US-CL-CURRENT: 705/37

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments KWIC | Draw Desc | Image

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☐ 8. Document ID: US 6195647 B1

L21: Entry 8 of 8 File: USPT Feb 27, 2001

US-PAT-NO: 6195647
DOCUMENT-IDENTIFIER: US 6195647 B1

TITLE: On-line transaction processing system for security trading

DATE-ISSUED: February 27, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Martyn; Peter	Ridgewood	NJ		
DeNat; Mark	Bedford	NY		
Hall; Diane Geberth	Laremont	NY		
Slomowitz; Ira	Saba			IL
Franke; Maureen	Jersey City	NJ		
Pang; Mei	West Orange	NJ		
Flynn; Edward	Newtown	CT		
Waldo; Mike	Danberry	CT		
Sweet; Pam	Beacon Falls	CT		
Coords; Deane	Woodbridge	CT		

US-CL-CURRENT: 705/37; 705/35, 705/36

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

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Terms	Documents
L20 and order near prefer$	8

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☐ Generate Collection | Print

L13: Entry 3 of 3 File: USPT Aug 7, 2001

US-PAT-NO: 6272474
DOCUMENT-IDENTIFIER: US 6272474 B1

TITLE: Method for monitoring and trading stocks via the internet displaying bid/ask trade bars

DATE-ISSUED: August 7, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Garcia; Crisostomo B.	Rancho Santa Fe	CA	92067	

APPL-NO: 09/ 246304 [PALM]
DATE FILED: February 8, 1999

INT-CL: [07] G06 F 17/60

US-CL-ISSUED: 705/37; 705/35, 705/36
US-CL-CURRENT: 705/37; 705/35, 705/36

FIELD-OF-SEARCH: 705/35, 705/36, 705/37

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected | Search ALL

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐	5347452	September 1994	Bay, Jr.	364/408

FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
410247210A	March 1997	JP	17/60

OTHER PUBLICATIONS

Etzkorn, Mark. Software Jungle, Part II. Futures: News, Analysis & Strategies for Futures, Options and Derivatives Traders. vol. 27, Issue 10, p. 58, Oct. 1998.*
Gold, Howard. Reading Charts by Candlelight. Barron's. p. 59, Jan. 30, 1995.*
Methany, Brad. East Meets West. Futures: News, Analysis & Strategies for Futures, Options and Derivatives Traders. vol. 28, Issue 2, p. 38, Feb. 1999.*
Wagner, Gary. Candlestick Probability. Futures: News, Analysis & Strategies for Futures, Options and Derivatives Traders. vol. 26, Issue 1, p 38, Jan. 1997.

ART-UNIT: 215

PRIMARY-EXAMINER: Downs; Robert W.

ASSISTANT-EXAMINER: Wasylchak; Steven R

ABSTRACT:

A method for providing stock information to traders. Stock information is received that includes bid offers, ask offers, the size of the bid offers and the size of the ask offers and the identity of the market makers making each offer. In addition, trade information is received that includes the volume of each trade, the time of each trade, and the price of each trade. The stock information and trade information are displayed on a display screen. The display screen includes a display of bid/ask trade bars for a stock or each of selected number of stocks in which percentage of sales at bid prices and percentage of sales at ask prices are depicted. By considering the display screen, traders are better able to determine trading patterns of the market makers in those selected stocks and increase their probability of buying low and selling high. In a preferred embodiment, the bid/ask trade bars include the following information: the percentage of trades at the ask prices, the percentage of trades at the bid prices, the percentage of trades between the ask and the bid, the bid-to-ask ratio, the volume of trades over a given interval. In a preferred embodiment, the bid/ask bar information can be filtered to represent the trading activity of all of the agents or a specified group of market makers or ECNs. Also, in a preferred embodiment, the stock information and trade information are received at a web site, and the traders who view the display screen are online traders having access to the Internet.

18 Claims, 6 Drawing figures

End of Result Set

L13: Entry 3 of 3 File: USPT Aug 7, 2001

DOCUMENT-IDENTIFIER: US 6272474 B1
TITLE: Method for monitoring and trading stocks via the internet displaying bid/ask trade bars

Brief Summary Text (35):
If a trader wants to buy or sell a stock or other security in the open market, he normally trades via agents on the market scene who specialize in that particular security. These people stand ready to sell the trader a security for some asking price (the "ask") if the trader would like to buy it. Or, if the trader owns the security and would like to sell it, the agent will buy the security from the trader for the bid price (the "bid"). The difference between the best bid and the best ask is called the spread. Stocks that are heavily traded tend to have very narrow spreads (e.g., 1/8+L of a point), but stocks that are lightly traded can have spreads that are significant, even as high as several dollars.

Brief Summary Text (46):
Many web sites portray stock trading information in chart form to help traders make buy/sell decisions. FIG. 1 shows a prior art candlestick price-volume chart. The prices of XYZ stock are shown at 40. The high and the low sale price during the 10 minute interval following the time indicated is depicted by line 41, the opening and closing prices during the 10 minute interval is depicted by rectangle 42. The rectangle is white if the opening price is lower than the closing price and black if the closing price is lower than the opening price. The volume traded during the 10 minute interval is shown at 44. Moreover, a few broker/dealers provide NASDAQ Level II to very active traders on the web. FIG. 2 shows a prior art Level II screen. In FIG. 1, the price scale is on the left and the volume scale is on the right. The time interval can be varied by the trader on his computer and is displayed on the bottom. In FIG. 1, for example, for the ten minute time interval starting at 10:40, a trader can determine the following information: (1) the market opened at 100 7/16 and closed at 100 8/16, the low was 100 6/16 and the high was 100 9/16, and (2) about 6000 shares were traded. A trader can also confirm this historical data by looking at the left-hand column of FIG. 2.

Drawing Description Text (2):
FIG. 1 shows a prior art candlestick price-volume chart.

Drawing Description Text (4):
FIG. 3 shows a preferred candlestick price-volume chart selected for all agents.

Drawing Description Text (6):
FIGS. 5 and 6 shows a preferred candlestick price-volume chart selected for a particular agent.

Detailed Description Text (2):
In the first preferred embodiment, traders pay the web site owner a fee. This entitles the traders to log in on the web site. The traders are Internet users and access the web site typically using their home computers and a browser program. When traders have completed their log in, they will observe screens similar to those shown in FIGS. 3 and 4. FIG. 3 shows a preferred candlestick price-volume chart and FIG. 4 shows a preferred Level II screen.

Other Reference Publication (4):
Wagner, Gary. Candlestick Probability. Futures: News, Analysis & Strategies for Futures, Options and Derivatives Traders. vol. 26, Issue 1, p 38, Jan. 1997.

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L16: Entry 30 of 32 File: USPT Sep 10, 2002

US-PAT-NO: 6446871
DOCUMENT-IDENTIFIER: US 6446871 B1

TITLE: Method and apparatus for storing reference codes in a writing instrument and for retrieving information identifed by the reference codes

DATE-ISSUED: September 10, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Buckley; John E.	Cumbeland	RI		
Peterson; Thomas H.	Plainville	MA		
Linderson; Paul E.	Warwick	RI		
Mercurio; Frank	Wallingford	CT		
Southworth; Robert O.	Pawtucket	RI		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
A.T. Cross Company	Lincoln	RI			02

APPL-NO: 09/ 335119 [PALM]
DATE FILED: June 17, 1999

PARENT-CASE:
RELATED APPLICATIONS This application claims priority from Provisional Application Ser. No. 60/089,89 filed Jun. 19, 1998, and is a continuation in part of Ser. No. 08/994,684 filed Dec. 19, 1997, now U.S. Pat. No. 5,955,719, both of which are assigned to the assignee of the present application, the A.T. Cross Company of Lincoln, R.I., and both of which are incorporated herein by reference.

INT-CL: [07] G06 K 7/10

US-CL-ISSUED: 235/472.03; 235/472.01, 235/462.45
US-CL-CURRENT: 235/472.03; 235/462.45, 235/472.01

FIELD-OF-SEARCH: 235/472.02, 235/472.03, 235/472.01, 235/462.49, 235/462.43, 235/462.46

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected Search ALL

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐	3892974	July 1975	Ellefson et al.	250/568
☐	3911270	October 1975	Taub	250/227
☐	4423319	December 1983	Jacobsen	295/472
☐	4800257	January 1989	Johner	235/472
☐	5640193	June 1997	Wellner	348/7
☐	5955719	September 1999	Southworth et al.	235/454
☐	6119944	September 2000	Mulla et al.	235/472.03

FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
0 351 063	January 1990	EP	
2 306 669	May 1997	GB	
WO 98/03923	January 1998	WO	
WO 98/40823	September 1998	WO	

ART-UNIT: 2376

PRIMARY-EXAMINER: Frech; Karl D.

ABSTRACT:

An interactive data transfer system and method is provided. In embodiments of the invention, the data transfer system includes a computing device, and a data well for interfacing with an elongate instrument, the elongate instrument having a data transfer end with a data transfer tip. The data well has a housing with an opening for receiving the data transfer tip of the elongate instrument. The data well also has a communications port operatively coupled to the computing device to provide data to the computing device, and the data well has a data communication device contained in the housing for interfacing with the data transfer tip when the data transfer end of the elongate instrument is received in the opening The computing device is programmed to receive data from the data well. The received data includes data indicative of at least one address on a global communications network. The computer device is also programmed, upon receipt of the at least one address, to launch an application to retrieve information related to the at least one address from the global communications network and transmit such information to the computing device.

31 Claims, 20 Drawing figures

L16: Entry 30 of 32 File: USPT Sep 10, 2002

DOCUMENT-IDENTIFIER: US 6446871 B1
TITLE: Method and apparatus for storing reference codes in a writing instrument and for retrieving information identifed by the reference codes

Brief Summary Text (2):
The present invention relates generally to a method and apparatus for reading and storing reference codes and subsequently retrieving information identified by the reference codes. More specifically, the present invention relates to a system that uses an instrument having an electronic reading, storage and transmission apparatus incorporated therein to read, store and subsequently transmit reference codes to a computer system. The computer system (which may be connected to a worldwide computer network such as the Internet) retrieves information identified by the reference codes.

Brief Summary Text (5):
While the use of concise articles attracts a large number of readers, those readers who wish to obtain more information on the subject matter of an article are often frustrated by the limited content provided in concise articles. These frustrated readers will often times read several periodicals or utilize online internet news and information services to obtain the information they desire. When using online news and information services, users are typically required to conduct a number of time consuming searches to obtain the information they desire. Thus, a need exists for a simple way of obtaining additional information related to articles of interest.

Brief Summary Text (8):
Furthermore, when a securities client, i.e., a consumer or prospective purchaser of bonds, stocks or other securities, wishes to buy or sell such securities, the client customarily contacts his or her broker or trader over the telephone or fax or in some instances over the Internet and types in or writes down the particular stock or other security and the number of shares of such stock or other security. This may lead to mistakes such as the stock symbol being incorrectly transcribed, the number of shares to be bought or sold being incorrectly transcribed, or an intended "buy" order being transcribed as a "sell" order. Thus, a need exists for a simple, less error-prone way to order items from a catalog or to trade securities.

Brief Summary Text (10):
U.S. Pat. No. 5,640,193 to Wellner, incorporated herein by reference, describes a method by which a user may scan a printed bar code or alphanumeric I.D. code to obtain information about the object with which the bar or I.D. code is associated through transmittal over a communications medium such as the Internet to retrieve the information.

Brief Summary Text (11):
U.S. Pat. No. 5,764,906 to Edelstein, et al., incorporated herein by reference, discloses an electronic resource annotation/denotation, request and delivery system permitting a user to locate design information on a computer network or system such as the Internet without the user having to know, for example, the universal resource locator (URL) of the desired resource.

Brief Summary Text (14):
PCT Published Application WO98/24036, incorporated herein by reference and published Jun. 4, 1998, describes a data retrieval system which incorporates a bar code reader to access information resources which are contained on the Internet.

Brief Summary Text (15):
PCT Published Application WO97/01137, incorporated herein by reference and published Jan. 9, 1997, describes a system and method for utilizing identification codes on objects to access resources over the Internet relating to those objects.

Brief Summary Text (16):
PCT Published Application WO98/03923, incorporated herein by reference and published Jan. 29, 1998, describes a bar code scanner and computer program to obtain information available on the Internet relating to information printed in a newspaper, book, magazine, catalog or other printed material.

Brief Summary Text (17):
PCT Published Application WO98/06055, incorporated herein by reference, also describes a computer coupled with a bar code reader for accessing information on the Internet or an intranet.

Brief Summary Text (20):
Previously, and by way of example, a reader of a newspaper or periodical who wanted to record a reference to a particular Internet website, while commuting was required to write down the site's uniform resource locator (URL) on a piece of paper. Later on, the reader would locate the piece of paper, turn on a computer, and type the URL into a web browser.

Brief Summary Text (21):
The systems and methods of the present invention save time by allowing a user to simply scan a code imprinted on an object to perform any of a number of tasks or transactions. The code can correspond to a variety of information such as URL sites. Embodiments of the present invention provide a system in which a detected reference code is transferred automatically to a computer system. The computer system can use an Internet browser to locate Internet sites on the World Wide Web that contain information related to the article, advertisement, catalog item or security associated with the detected reference code.

Brief Summary Text (22):
One embodiment of the invention includes a writing implement. The writing implement includes a writing end and, at the end opposite to the writing end, a data transfer end. The data transfer end reads reference codes associated with coded objects. The data transfer end is then placed into a data well. The data well communicates with a computer or other electronic device via a cable. Alternatively, the data well can communicate with a computer via wireless communication technology. In still another embodiment, the writing implement can communicate directly with a computer using wireless communication technology. The wireless communication technology can include an infra-red or a radio-frequency link. Once the writing implement transmits signals representing the scanned code to a computer, the computer launches an application to bring the computer user to the Internet site or other location which was referenced by the scanned code. Alternatively, when a user logs on to her computer and connects to the Internet, one embodiment of a system according to the invention presents a link or links associated with the scanned code or codes. The links can be presented in association with the user's favorite portal.

Brief Summary Text (23):
Thus, a user can retrieve information relating to newspapers or other periodicals, a customer can order an item from a catalog, and a client can trade stocks or other securities. All of these actions can be performed expeditiously with relatively few mistakes. The present invention facilitates a user's ability to retrieve information on the Internet or other broad-based computer communication network using an altered version of a commonly-carried writing instrument.

Detailed Description Text (5):
One embodiment of a computer system according to the invention can also transmit codes or other information through the data well to the pen, or directly from the computer to the pen, for later use by the user. The computer system can contain a database of codes and World Wide Web Internet addresses corresponding to the codes. The computer system then may access Internet sites corresponding to the addresses associated with the particular code to provide the user with further information related to the subject matter of the article or advertisement. Alternatively, the computer system may have no such database of codes but may rather possess the ability to communicate with a site outside the computer system, which site may contain the database for associating codes to Internet addresses.

Detailed Description Text (10):
Upon transferring signals representing the scanned code to the computer 28, an application on the computer 28 contacts a company's site on a wide-area network, e.g., on the Internet, corresponding to the scanned code. Furthermore, the scanned code can include instructions to order a particular item or items from the company.

Detailed Description Text (11):
In addition to use by consumers for catalog shopping, the present invention may be

used by travelling sales personnel. Travelling sales personnel can order any one of a number of items from their own catalog or order book by scanning a barcode 14 associated with a selected item and transferring signals representing the scanned barcode to the computer 28. Upon receipt of the transferred signals, an application on the computer 28 sends an order to the home office via a wide-area network such as the Internet.

Detailed Description Text (12):
In addition to the above applications, a user or stock broker may secure the purchase or sale of stocks or other securities over, for example, the Internet, by performing the following actions. The user scans a code which corresponds to a particular stock or other security. The user also scans a code for a buy, sell or other type of trade. In addition, the user scans another code for the number of shares of such security to be traded. Obviously, a single bar code may be implemented to perform all three categories of information desired.

Detailed Description Text (30):
In embodiments of the present invention, the computer 28 is programmed to receive codes from the data well, and upon receiving a code, to access a database contained either within the computer or at a remote location, e.g., using the Internet. In one embodiment, by way of example, a remote database is accessed by the computer through an Internet server using one of a number of known web browsers. The database provides an Internet home page URL address corresponding to the first four characters of the numeric string, and the computer system connects to the internet site corresponding to the URL address using the web browser. At the Internet site, the last four characters of the numeric string are used to identify the address of a home page corresponding to the particular article or advertisement or product or stock whose bar code was scanned by the reader.

Detailed Description Text (31):
In embodiments of the present invention, the home pages corresponding to articles or advertisements may be maintained by a print publisher such as a newspaper or magazine, while the database of periodicals may be maintained by a service agency to which both readers and publishers could subscribe. In further embodiments of the present invention previously described, a catalog company may maintain a home page to which a catalogue customer may send an order for one or more items within the company's catalogue. Similarly, a salesperson's home office may maintain a home page or other Internet site to which orders may be forwarded for the salesperson's customers. Finally, the stock brokerage or other investment firm may maintain a home page or other Internet site such that its customers or clients may trade stocks and other securities over the Internet by scanning the code corresponding to a particular stock and the number of shares of that particular stock as well as whether it is a buy, sell or other transaction.

Detailed Description Text (33):
In a second embodiment, in contrast to the first embodiment where it acts as a "go-between", the manufacturer or seller could provide its own server with the information represented by the bar code discussed above, and may garner revenue from provision of such information. Additionally, the company may provide the service to users performing searching on other Internet sites or other databases for information requested by a user which is not already provided on its server, and charge fees for such access and service. Obviously, the provision of such services in the above embodiment may be provided by entities other than the manufacturer or seller of the electronic pen, such as a service bureau or a publisher, like a newspaper.

Detailed Description Text (34):
FIG. 4 illustrates yet another embodiment of the present invention. FIG. 4 illustrates a method of implementing what is known in the industry as a "hard" portal which is, for the purposes of this application, defined as a server or group of servers that are in continual communication with a client machine regardless of where the customer or user is on the Internet. One example of this is a service provided by America Online, Inc. (AOL). A preferred manner of providing a hard portal service is to install appropriate application software on the clients/customers/user's machine and to allow the application to run behind the browser, according to well-known techniques. In this way, the application stays in contact with the portal server, and the browser can serve up content anywhere on the Internet.

Detailed Description Text (36):
Software on the client's PC receives the signal representing the scanned bar code and runs a browser installed on the client PC 104. The software uses the browser and the signal representing the scanned bar code to connect over the Internet 106 to a

connection server 108.

Detailed Description Text (39):
The news agency server 110 implements a common gateway interface (CGI) process to dynamically map between a filtered bar code and a corresponding Uniform Resource Locator (URL). The URL refers to specific articles in content databases 114, 116 and 118. Multiple URLs can be associated with a single bar code. The connection server 108 then relays these URLs from the News Corp Web server 110, through the Internet 106, to the client PC 104.

Detailed Description Text (40):
One method of providing a bar code to Internet connection is the indirect method disclosed in published PCT application assigned to Solar Communications of Naperville, Ill., WO97/01137, the text of which is incorporated herein by reference. This PCT application concerns, among other things, a database that relates existing uniform product code (UPC) numbers found on products like soup or soda to Internet URLs. However, Solar Communications' application teaches an input device, i.e., UPC bar code reader, that is attached to a computer. Solar Communications' application does not teach a free and independent data reader that can be used in a variety of environments, e.g., on a train or on an airplane, and subsequently interfaced with a computer to download information obtained by the data reader.

Detailed Description Text (43):
A software application 201 on the client's PC 104 receives the signals representing the scanned code(s) and runs a browser 206. The application 201 filters the signals and/or connects via the Internet 106 and Portal Server 208 to Remote Nodes 210, 212 to determine URLs and other information associated with the scanned bar code(s). In step 203, the application 201 sends the browser 206 the associated URLs and other information. As shown in FIG. 9, the browser then displays the information, e.g., as links. One embodiment of a system according to the invention can integrate links associated with scanned codes into a user's favorite search engine or portal.

Detailed Description Text (44):
A user provided with a variety of links based on previously scanned codes can then select one of the links. The browser 206, activated by the selection of a link, connects via the Internet 106 and the CrossLink Portal Server 208 to a content provider 214 or 216 and to a particular article located in a database 220 or 218 supported by the content provider 214 or 216. In addition, bar code mapping software 222 can map bar codes to articles in a database 220 supported by a content provider 214.

Detailed Description Text (47):
While the present invention has been described as being useful in the interactive print, catalog and securities industries, it has utility in a number of other industries and applications. Examples include the following: the utilization of bar or other codes in an encyclopedia to link the user to further information; use of codes in yellow pages or other directories; use of codes for e-commerce banking, wherein a user can scan, for example, an electric utility bill code and pay such bill over the Internet. Other examples include foreign language translation, wherein scanning a code on an object may link the user to a foreign language translation source over the Internet. Yet another example may be interactive shopping wherein the user may scan a number of home products or foodstuffs and order such items by connecting to a supermarket's Internet web site. A further example is the use by poll takers who may scan a particular code which corresponds to the choices of the person or persons being polled.

Detailed Description Text (48):
A still further example is the use of the present invention for standardized test purposes. In this application, a student's or other user's choices are scanned. Once a testing sequence is over, the electronic pen may be utilized to link the answer's to the testing authority's Internet web site, facilitating instant feedback, fewer false hits compared to present pencil-marking techniques due to the accuracy of bar code vending techniques and instant statistical analysis through cumulation of many users' test scanners.

Detailed Description Text (49):
In still another embodiment, the electronic pen has an audio recording module in place of the bar code reader, enabling a user to record an Internet URL address in the recording module. In this embodiment, the pen well includes circuitry to receive the URL address from the electronic pen, either acoustically or electronically, and to transfer the URL address to the computer system. For this embodiment, the computer system contains a voice recognition engine and is programmed to receive the URL address, and upon receipt, to enable a web browser to access the Internet site

having the URL address.

Detailed Description Text (52):
There are several advantages to embodiments of the present invention discussed above. First, service agencies using embodiments of the invention can provide publishers with demographics of readers to assist the publishers in targeting advertisements to particular groups of readers. Second, readers can easily obtain additional information related to the content of articles or advertisements in periodicals. Third, since advertisements containing the bar codes will have the potential of transferring additional information to readers, publishers will be able to derive additional revenues from advertisements. Although it is common for advertisements to contain URL addresses to Internet sites from which readers can obtain additional information, prior to the present invention, readers often lose or forget the URL addresses, before accessing the Internet site.

CLAIMS:

17. The implement of claim 16, wherein the global communications network includes the Internet.

18. The implement of claim 17, wherein the computing device includes a display device to display information retrieved over the Internet.

WEST

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L6: Entry 62 of 79 File: USPT Nov 13, 2001

US-PAT-NO: 6317728
DOCUMENT-IDENTIFIER: US 6317728 B1

TITLE: Securities and commodities trading system

DATE-ISSUED: November 13, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Kane; Richard L.	Boca Raton	FL	33496	

APPL-NO: 09/ 170745 [PALM]
DATE FILED: October 13, 1998

INT-CL: [07] G06 F 17/60

US-CL-ISSUED: 705/37; 705/36
US-CL-CURRENT: 705/37; 705/36

FIELD-OF-SEARCH: 705/35, 705/36, 705/37, 705/38, 705/39, 235/379, 235/380, 340/825.26

PRIOR-ART-DISCLOSED:

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ART-UNIT: 215

PRIMARY-EXAMINER: Millin; Vincent

ASSISTANT-EXAMINER: Kazimi; Hani M.

ABSTRACT:

In accordance with the invention there is provided a securities trading system based on the principles of artificial intelligence. It includes a data acquisition system having an input communicating with a securities exchange for receiving securities buy/sell data; a clock for generating clock times; a processing logic having inputs respectively communicating with the data acquisition system and with the clock for assigning respective clock times to said buy/sell data; a decision logic having a repository for storing a set of buy/sell rules for buying and selling securities in response to the buy and sell data aligned with the clock times; and a buy and sell execution system having an input communicating with the decision logic for executing buy and sell orders in conformance with the buy/sell rules. In the securities trading system according to the invention, the decision logic includes at least one decision agent, the agent representing a respective buy/sell rule, wherein further the decision logic may include at least two decision agents, each decision agent representing a respective buy rule or a respective sell rule. Artificial intelligence is provided in that the decision agents are rewarded in a feed-back arrangement by being given added or reduced voting power when their recommendations are found to respectively result in successful or unsuccessful decisions. Thereby a self-learning feature is provided which results in improving the performance of the system as the number of transactions increase.

9 Claims, 23 Drawing figures

L3: Entry 49 of 61 File: USPT Nov 13, 2001

DOCUMENT-IDENTIFIER: US 6317728 B1
TITLE: Securities and commodities trading system

Abstract Text (1):
In accordance with the invention there is provided a securities trading system based on the principles of artificial intelligence. It includes a data acquisition system having an input communicating with a securities exchange for receiving securities buy/sell data; a clock for generating clock times; a processing logic having inputs respectively communicating with the data acquisition system and with the clock for assigning respective clock times to said buy/sell data; a decision logic having a repository for storing a set of buy/sell rules for buying and selling securities in response to the buy and sell data aligned with the clock times; and a buy and sell execution system having an input communicating with the decision logic for executing buy and sell orders in conformance with the buy/sell rules. In the securities trading system according to the invention, the decision logic includes at least one decision agent, the agent representing a respective buy/sell rule, wherein further the decision logic may include at least two decision agents, each decision agent representing a respective buy rule or a respective sell rule. Artificial intelligence is provided in that the decision agents are rewarded in a feed-back arrangement by being given added or reduced voting power when their recommendations are found to respectively result in successful or unsuccessful decisions. Thereby a self-learning feature is provided which results in improving the performance of the system as the number of transactions increase.

Brief Summary Text (10):
The invention embodies a process for trading securities that operates as follows: On a typical trading day a commodity or a stock may take a small dip at e.g. 9:35 am, reach its high at 11:30 am and decline until 3 pm. perhaps with a small run up at close of the day. The system buys, through a selected one of the agents, a stock or commodity at a morning dip and sells it at a mid-morning high. It then sells the stock or commodity short and buys to cover at a lower afternoon price. One makes money on the way up, and more on the way down. If possible, the system will end the day without holding any stock . . . but it if does, it will be short position. It is far more likely a stock will go down overnight than go up in value.

Brief Summary Text (19):
In accordance with the invention there is provided a securities trading system having a data acquisition system having an input communicating with a securities exchange for receiving securities buy/sell data; a clock for generating clock times; a processing logic having inputs respectively communicating with the data acquisition system and with the clock for assigning respective clock times to said buy/sell data; a decision logic having a repository for storing a set of buy/sell rules for buying and selling securities in response to the buy and sell data aligned with the clock times; and a buy and sell execution system having an input communicating with the decision logic for executing buy and sell orders in conformance with the buy/sell rules.

Brief Summary Text (20):
In the securities trading system according to the invention, the decision logic includes at least one decision agent, the agent representing a respective buy/sell rule, wherein further the decision logic may include at least two decision agents, each decision agent representing a respective buy rule or a respective sell rule.

Brief Summary Text (21):
According to a further feature, the securities trading system provides that the sell rule is a short sell rule and the buy rule is a long buy rule, and the decision logic includes at least one agent being responsive to one of the buy/sell rules, that agent being operative for generating a buy/sell order in response to the buy/sell data conforming to the buy/sell rule.

Brief Summary Text (22
The securities trading system according to the invention may further include a plurality of agents, each agent operating in response to a dedicated one of the buy/sell rules, and wherein each of the agents has a respective input for commonly receiving the buy/sell data.

Brief Summary Text (23):
The securities trading system may further include a feed-back connection from the current assets memory to each of the agents for conveying a cumulative number of merit points to a respective agent having issued a sell order for a successful trade.

Brief Summary Text (24):
The invention further includes a method for trading securities with a securities exchange, the method including a data acquisition system having an input communicating with at least one securities exchange for receiving buy/sell data; a clock for generating clock times; a processing logic having inputs respectively communicating with the data acquisition system and with the clock for assigning respective clock times to the buy/sell data; a decision logic including a repository for storing a plurality of buy/sell rules for buying and selling securities in response to the buy/sell data; the decision logic having a plurality of agents, each operating in response to a respective buy/sell rule for generating buy/sell orders for securities in conformance with the buy/sell data; the agents having outputs communicating with the securities exchange for executing the buy/sell orders; wherein the method includes the steps:

Detailed Description Text (51):
WealthBuilder communicates over the internet to command internet brokers to execute trades and to retrieve results. It is the first application to do so. It mechanically decrypts the Secure Socket Layer internet protocol, reads the web pages of the brokers, issues commands to the brokers, and retrieves trade and account information from the brokers. An example of this is the program's ability to command trades against E*trade. Beginning in early

Detailed Description Text (110):
The system supports direct connection via OLE or file transfer, or it can mimic the function of a terminal accessing an electronic trading system while placing orders, checking the status of orders, and checking the price information on securities being tracked. This enables the automated management of accounts held by specialists. The modular nature of this interface for securities trading is unique.

Detailed Description Text (139):
The system can pull trade rules and data from our web site, as well as identify the following:

Detailed Description Text (171):
The invention is a mechanized, fully automated securities trading system that incorporates decision making, execution and learning capabilities. The system engages in automated decision making to acquire and sell securities positions via processing logic. The securities trading system provides a number of long and short Intelligent agents. The decision making includes the voting of Intelligent agents Currently there are 160 agents (80 long, 80 short). The acquisition and disposal of positions is completely automated, with no human intervention required or desired. This is a unique aspect of the system. A feedback arrangement monitors the success and failure of the agents and rewards/punishes the agents, thereby enabling the program to learn. This improves the system performance based on past and current experience, and enables the system to continually self adapt. The system is continually able to invent and adjust itself to adapt to changing market conditions and the trading/trending characteristics of individual securities. Other agents loop back on the agents themselves, looking for groups of agents that are more accurate taken in combination--this performs a similar function to but is much faster than a neural net. Additional enhancements improve and speed the learning capabilities of the system. LeMarck, Darwin and RV are learning modes designed to leverage and circumvent the strengths and limits of self learning A.I. Systems. Of particular importance and uniqueness is the speed in which this selfwearing artificial intelligence is Implemented . . . the system is fast enough to make decisions In real time, procesing trade by trade data from entire markets. Mechanically, the system utilizes multiple computers networked together over a local area network using a high speed messaging protocol custom designed for this application, which is able to distribute the workload of decision making, position monitoring and self-learning

Detailed Description Text (205):

The system supports direct connection via OLE or file transfer, or it can mimic the function of a terminal accessing an electronic trading system while placing orders, checking the status of orders, and checking the price information on securities being tracked. This enables the automated management of accounts held by specialists. The modular nature of this interface for securities trading is unique.

CLAIMS:

1. A securities trading system comprising:

a data acquisition system having an input communicating with a securities exchange for receiving securities buy/sell data;

a clock for generating clock times;

a processing logic having inputs respectively communicating with said data acquisition system and with said clock for assigning respective clock times to said buy/sell data; and

a decision logic having a repository for storing a set of buy/sell rules for buying and selling securities in response to said buy and sell data combined with said clock times;

a current assets memory;

a buy and sell execution system having an input communication with said decision logic for executing buy and sell orders in conformance with said buy/sell rules, wherein said decision logic includes at least one agent being responsive to one of said buy/sell rules, said agent being operative for generating a buy/sell order in response to said buy/sell data conforming to said buy/sell rule, and a feed-back connection from said current assets memory to each of said agents for conveying a cumulative number of merits to a respective agent having issued a sell order for a successful trade.

2. A securities trading system according to claim 1, wherein said decision logic includes at least one decision agent, said agent representing a respective buy/sell rule.

3. A securities trading system according to claim 2, wherein said decision logic includes at least two decision agents, each decision agent representing a respective buy rule and a respective sell rule.

4. A securities trading system according to claim 3, wherein said sell rule is a short sell rule, and said buy rule is a long buy rule.

5. A securities trading system according to claim 1, comprising a plurality of said agents, each agent being responsive to a dedicated one of said buy/sell rules.

6. A securities trading system according to claim 5, each of said agents having a respective input for commonly receiving said buy/sell orders.

7. A method for trading securities with a securities exchange commission, the method including a data acquisition system having an input communicating with at least one securities exchange for receiving buy/sell data; a clock for generating clock times; a processing logic having inputs respectively communicating with said data acquisition system and with said clock for assigning respective clock times to the buy/sell data; a decision logic including a repository for storing a plurality of buy/sell rules for buying and selling securities in response to the buy/sell data; said decision logic having a plurality of agents, each assigned a respective buy/sell rule for generating buy/sell orders for securities in conformance with said buy/sell data; said agents having outputs communicating with said securities exchange for executing said buy/sell orders; the method comprising the steps of:

(a) issuing to all agents a tentative buy short/sell long order for a given security;

(b) soliciting from all agents a tentative buy short decision of a given security;

(c) affirming with the decision logic the buy short decision if a majority of the agents have indicated an affirmative buy short decision; and

(d) executing with an executing logic the affirmed buy short order including;

(a) monitoring for a given length of time the security bought on the buy short order;

(b) issuing, when the security has accrued value sufficiently to at least cover to short buy plus a given profit, a buy long order for the security; and

monitoring for another given length of time with the decision logic the rates of success and failure of each agent and feeding back to each agent a cumulative merit quotient increment according to the cumulative rate of success and/or failure for the respective agent.

8. A method for trading securities with a securities exchange, the method including a data acquisition system having an input communicating with at least one securities exchange for receiving buy/sell data; a clock for generating clock times; a processing logic having inputs respectively communicating with said data acquisition system and with said clock for assigning respective clock times to the buy/sell data; a decision logic including a repository for storing a plurality of buy/sell rules for buying and selling securities in response to the buy/sell data; said decision logic having a plurality of agents, each assigned a respective buy/sell rule for generating buy/sell orders for securities in conformance with said buy/sell data; said agents having outputs communicating with said securities exchange for executing said buy/sell orders; the method comprising the steps of:

(a) issuing to all agents a tentative buy short/sell long order for a given security;

(b) soliciting from all agents a tentative buy short decision of a given security;

(c) affirming with the decision logic the buy short decision if a majority of the agents have indicated an affirmative buy short decision;

(d) executing with an executing logic the affirmed buy short order; and

having artificial intelligence based on a feedback system wherein, after executed transactions the agents are given added or reduced voting power in accordance with the respective success or failure of said transactions based on recommendations of the respective agents.

WEST

Generate Collection Print

L4: Entry 21 of 22 File: USPT Jun 5, 2001

US-PAT-NO: 6243691
DOCUMENT-IDENTIFIER: US 6243691 B1

TITLE: Method and system for processing and transmitting electronic auction information

DATE-ISSUED: June 5, 2001

INVENTOR-INFORMATION:

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Kaplan; Samuel Jerrold	Hillsborough	CA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
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APPL-NO: 08/ 624259 [PALM]
DATE FILED: March 29, 1996

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US-CL-ISSUED: 705/37; 705/26
US-CL-CURRENT: 705/37; 705/26

FIELD-OF-SEARCH: 705/37, 705/26, 705/27, 705/39, 395/500, 364/578, 703/22

PRIOR-ART-DISCLOSED:

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ART-UNIT: 273

PRIMARY-EXAMINER: Stamber; Eric W.

ASSISTANT-EXAMINER: Knox; Lonnie

ABSTRACT:

A system and method for conducting a multi-person, interactive auction, in a variety of formats, without using a human auctioneer to conduct the auction. The system is preferably implemented in software. The system allows a group of bidders to interactively place bids over a computer or communications network. Those bids are recorded by the system and the bidders are updated with the current auction status information. When appropriate, the system closes the auction from further bidding and notifies the winning bidders and losers as to the auction outcome.

100 Claims, 14 Drawing figures

L4: Entry 21 of 22 File: USPT Jun 5, 2001

DOCUMENT-IDENTIFIER: US 6243691 B1
TITLE: Method and system for processing and transmitting electronic auction information

Brief Summary Text (12):
A recent innovation applied to E-mail auctions is the use of the Internet's World Wide Web (WWW) facility to post descriptions of the merchandise and show the current high bids. This innovation provides the advantage of eliminating the need to electronically mail bidding updates to bidders. And since WWW traffic is much higher priority on the Internet, bidders suffer less of a time lag in seeing updated Web pages. However, a human auctioneer is still involved and is required to manually process the electronic mail bids, enter them into the bid database, and to update the World Wide Web pages with current high bid information.

Brief Summary Text (18):
In the third group of patents related to electronic commerce, patents relating to securities trading, U.S. Pat. No. 4,412,287 entitled Automated Stock Exchange, and U.S. Pat. No. 5,077,665 entitled Distributed Matching System, disclose means for prospective buyers to post offers to buy a given security at a specific price and for prospective sellers to post offers to sell a given security at a specific price. These automated systems maintain lists of buy and sell orders. If an offer to buy a security is placed at a price greater than or equal to an existing offer to sell that security at a given price, these systems will automatically consummate the trade by matching the buyer with the seller. While the securities industry uses, and these patents disclose, such terms as "auction" and "bid", they are actually referring to the process of matching a set of buyers' bids with a set of sellers' prices. There is no auction in the true sense of a plurality of bidders simultaneously bidding in a manner accessible to all bidders and sellers in order to achieve a high selling price. In fact, these patented systems do not include disclosure of the list of open buy or sell orders, thus depriving the seller of the ability to openly solicit the highest price for securities. Instead, the market price of securities sold through these automated systems fluctuates up and down based upon the last successful match between an open buy order and an open sell order when both the buyer and seller have placed orders at compatible prices. There is no ability in such systems to conduct truly competitive and open bidding.

Other Reference Publication (4):
Todd E. Rockoff et al., "Design of an Internet-based system for remote Dutch auctions," Internet Research: Electronic Networking Applications and Policy, vol. 5, No. 4, 1995, pp. 10-16.

L9: Entry 4 of 5 File: PGPB Oct 10, 2002

PGPUB-DOCUMENT-NUMBER: 20020147670
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020147670 A1

TITLE: Digital options having demand-based, adjustable returns, and trading exchange therefor

PUBLICATION-DATE: October 10, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Lange, Jeffrey	New York	NY	US	

APPL-NO: 09/ 950498 [PALM]
DATE FILED: September 10, 2001

RELATED-US-APPL-DATA:
Application 09/950498 is a continuation-in-part-of US application 09/809025, filed March 16, 2001, PENDING
Application 09/809025 is a continuation-in-part-of US application 09/744816, filed April 3, 2001, PENDING
Application 09/744816 is a a-371-of-international WO application PC/T/US00/19447, filed July 18, 2000, UNKNOWN
Application PC/T/US00/19447 is a continuation-in-part-of US application 09/448822, filed November 24, 1999, PATENTED
Application is a non-provisional-of-provisional application 60/144890, filed July 21, 1999,

INT-CL: [07] G06 F 17/60

US-CL-PUBLISHED: 705/35; 705/37
US-CL-CURRENT: 705/35; 705/37

REPRESENTATIVE-FIGURES: 2

ABSTRACT:

Methods and systems for conducting demand-based trading are described. In one embodiment, states are established, each state corresponding to at least one possible outcome of an event of economic significance. An investment amount may be determined as a function of a selected outcome, a desired payout, and a total amount invested in the states. In another embodiment, an investment amount may be determined as a function of parameters of a financial product. In another embodiment, a payout may be determined as a function of an investment amount, a selected outcome, a total amount invested in the states, and an identification of a state corresponding to an observed outcome of the event.

RELATED APPLICATIONS

[0001] This application is a continuation-in-part of U.S. application Ser. No. 09/809,025, filed Mar. 16, 2001, which is a continuation-in-part of U.S. application Ser. No. 09/774,816, filed Jan. 30, 2001 (as the U.S. national stage application under 35 U.S.C. .sctn.371 of Patent Cooperation Treaty application serial number PCT/US00/19447, filed Jul. 18, 2000), which is a continuation-in-part of U.S. application Ser. No. 09/448,822, filed Nov. 24, 1999. This application also claims priority to Patent Cooperation Treaty application serial number PCT/US00/19447, filed Jul. 18, 2000; and U.S. provisional application serial No. 60/144,890, filed Jul. 21, 1999. Each of the applications referred to in this paragraph is incorporated by reference in its entirety into this application.

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End of Result Set

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L2: Entry 1 of 1 File: PGPB Dec 12, 2002

DOCUMENT-IDENTIFIER: US 20020188548 A1
TITLE: Methods and systems for monitoring securities quotes

Summary of Invention Paragraph (5):
[0004] The securities trading industry has burgeoned since the advent of the Internet. Many companies offer securities trading services through a variety of automated systems, such as a telephone or a computer system. For example, placing orders to buy or sell securities may include using an order entry screen on a computer system. Before placing an order, a trader of securities may review technical analysis data and/or securities quotes which may aid in making trading decisions.

Summary of Invention Paragraph (7):
[0006] Market makers participating in a market commit capital to buy and sell stock on the market. Under the rules of certain markets (e.g., the NASDAQ Stock Market), a market maker participating in the exchange of a particular security is expected to provide both buy and sell quotes for that security. These quotes do not necessarily represent actual orders; rather they represent a willingness on the part of the market maker to execute transactions at the quoted price. The SOES network is a non-negotiated exchange in which market makers may place offers and bids and may be required to meet fill requirements set forth in a participation agreement with the National Association of Securities Dealers ("NASD"). SOES is directed to filling small orders (i.e., less than 1000 shares). Since SOES is non-negotiated, it may be desirable for certain traders in securities to bypass SOES in favor of negotiating a transaction with an ECN which is better than the current best bid or ask price.

Summary of Invention Paragraph (9):
[0008] To facilitate trading, a market generally provides traders with open quote and order information. To make market center quotes and order information more useful in time-critical situations (e.g., day-trading), it may be desirable to provide a method for presenting aggregated trading data in real-time. Moreover, given the quantity of information potentially available to traders, it may also be desirable to provide a method for allowing a trader of securities to customize a display of this data in real-time.

Summary of Invention Paragraph (11):
[0009] An embodiment of the invention relates to an improved computer-implemented method and system for displaying information related to securities to a user. In one embodiment, a system and a method may provide a trader of securities real-time access to combinations of quotes for a security, which may be sorted by common price and common trading direction.

Detail Description Paragraph (21):
[0046] FIG. 4 is a flowchart illustrating an embodiment of a method of order placement for securities that may include automatically matching a placed order with quote information displayed in FIG. 3. Upon review of the securities quote information displayed by the method depicted in FIG. 3, a user may choose to trade a security. Trading may involve using user preferences previously stored in a first computer system or a second computer system, as described below. User preferences may rank market centers according to a sequence in which the user prefers a trade to be filled by the market centers. Upon a user's request to place an order (e.g., a buy order or a sell order for a security displayed with a combined quote), market centers represented in a combined quote may be automatically matched with market centers in the user preferences to fill the order. If an order is not filled by a first market center, the method may include attempting to fill the order though a second market center.

Detail Description Paragraph (43):
[0068] Quote-specific information may include: a price, a number of shares, a market

center identification, market center identification number, a trailing stop price, a stop loss price, a selection mechanism (e.g., a "purchase" push-button), and an account identification number. Additional (or less) quote-specific information may be displayed based on user configuration settings. As used herein, a "trailing stop order" may generally refer to a stop loss order that may follow a favorable price trend. As used herein, a "trailing stop price" may generally refer to a price specified in a trailing stop order. As used herein, a "stop loss order" may generally refer to an order to buy or sell a quantity of a security if a specified price is reached or passed. For example, the specified price may be below the current market price, and the order may be to sell. As used herein, a "stop loss price" may generally refer to a price specified in a stop loss order.

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L2: Entry 1 of 1 File: PGPB Dec 12, 2002

PGPUB-DOCUMENT-NUMBER: 20020188548
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020188548 A1

TITLE: Methods and systems for monitoring securities quotes

PUBLICATION-DATE: December 12, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
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APPL-NO: 09/ 876270 [PALM]
DATE FILED: June 6, 2001

INT-CL: [07] G06 F 17/60

US-CL-PUBLISHED: 705/37
US-CL-CURRENT: 705/37

REPRESENTATIVE-FIGURES: 3

ABSTRACT:

Methods and systems for displaying information related to securities are provided. In one embodiment, a method may include receiving quotes for at least one security. The received quotes may include a market center identification, a price, a quantity, and a trading direction. The method may also include combining at least two of the received quotes. The two combined quotes may include quotes received from a common market center. Alternately, the two combined quotes may include quotes received from different market centers. The quotes may be combined if they include a common price and a common trading direction for at least the one security. In addition, the method may include displaying the combined quotes to the user.

L3: Entry 1 of 2 File: USPT Jan 21, 1986

DOCUMENT-IDENTIFIER: US 4566066 A
TITLE: Securities valuation system

Brief Summary Text (63):
A principal object of this invention is to allow the user, e.g., a stockbroker, investment banker, bank trust department, investment manager, pension fund manager, individual investor, etc., to produce valuation schedules of his customer's, or his own, securities portfolios, even though those portfolios may contain securities in seldom traded, as well as widely traded securities. To achieve this, 3 classes of security files are utilized.

Brief Summary Text (65):
A second class of securities herein referred to as Group 2 securities are those less-widely traded securities which might be expected to appear in a number of portfolios of one or more users, but do not at a given time appear on the daily Bunker-Ramo listings. These securities are stored in the master security files, but they contain no price information. The user must manually supply a price for each such security at the time the portfolio is priced.

Brief Summary Text (66):
A third group of securities, herein referred to as Group 3 supplemental securities, are those infrequently traded securities which may appear in one or more portfolios of a particular user, or a small number of users. All data on these securities is entered into the system once by the user, the first time the security appears in any portfolio.

Detailed Description Paragraph Table (24):
_____ **ANYSE01-04 New York Stock Exchange **BASE001-003 American Stock Exchange **COTC001-003 Over-the-Counter (NASDAQ) **DNYBE01-04 New York Bond Exchange **EPCSE01-02 Pacific Coast Stock Exchange **FMWSE01 Midwest Stock Exchange & American Bond Exchange Field No. Field Code Field Description _____ 1 A Security number 2 A$ Security name (begin) 3 B$ Security name (end) 4 C$ Ticker symbol (1-7) CUSIP (10-18) 5 B Clearinghouse number 6 C Open price 7 D High price 8 E Low price 9 F Last price 10 G Close price 11 H Adjusted close price 12 I Yearly high price 13 J Yearly low price 14 K Bid price 15 L Offer price 16 M Previous bid price 17 N Earnings indicator 18 O Quarterly earnings 19 P Annual earnings 20 Q Ex-dividend indicator 21 R Dividend payment indicator 22 S Stock dividend of indicator 23 T Quarterly dividend 24 U Annual dividend 25 V Stock dividend percent 26 W Cash dividend date 27 X Stock dividend date 28 Y Volume 29 Z Round lot indicator (End-of-file marked by A=0)

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L21: Entry 8 of 8 File: USPT Feb 27, 2001

US-PAT-NO: 6195647
DOCUMENT-IDENTIFIER: US 6195647 B1

TITLE: On-line transaction processing system for security trading

DATE-ISSUED: February 27, 2001

INVENTOR-INFORMATION:

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DeNat; Mark	Bedford	NY		
Hall; Diane Geberth	Laremont	NY		
Slomowitz; Ira	Saba			IL
Franke; Maureen	Jersey City	NJ		
Pang; Mei	West Orange	NJ		
Flynn; Edward	Newtown	CT		
Waldo; Mike	Danberry	CT		
Sweet; Pam	Beacon Falls	CT		
Coords; Deane	Woodbridge	CT		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
The Nasdaq Stock Market, Inc.	Washington	DC			02

APPL-NO: 08/ 722847 [PALM]
DATE FILED: September 26, 1996

INT-CL: [07] B06 F 17/60

US-CL-ISSUED: 705/37; 705/35, 705/36
US-CL-CURRENT: 705/37; 705/35, 705/36

FIELD-OF-SEARCH: 705/37, 705/36, 705/35, 345/333

PRIOR-ART-DISCLOSED:

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Search Selected | Search ALL

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
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☐	4674044	June 1987	Kalmus et al.	705/37
☐	4750135	June 1988	Boilen	709/231
☐	5038284	August 1991	Kramer	705/37
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FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
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Berkely, Alfred R, "NASDAQ's Technology Floor: Its President Takes Stock", IEEE Spectrum, Feb. 1997.

ART-UNIT: 271

PRIMARY-EXAMINER: Cosimano; Edward R.

ASSISTANT-EXAMINER: Hayes; John W.

ABSTRACT:

A data processing system provides an interface with a securities exchange system

over which securities are traded. The system allows a user to configure displays tailored for specific functions and to show displays for a particular security. The user may also view a display showing information about selected securities, monitor trade activity, participate in a trade, and report trades. In addition, a user may display information for a selected set of securities on a continuously updated basis and can easily select from a displayed list, a desired security and certain information and functions associated with the selected security.

29 Claims, 14 Drawing figures

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L21: Entry 8 of 8 File: USPT Feb 27, 2001

DOCUMENT-IDENTIFIER: US 6195647 B1
TITLE: On-line transaction processing system for security trading

Abstract Text (1):
A data processing system provides an interface with a securities exchange system over which securities are traded. The system allows a user to configure displays tailored for specific functions and to show displays for a particular security. The user may also view a display showing information about selected securities, monitor trade activity, participate in a trade, and report trades. In addition, a user may display information for a selected set of securities on a continuously updated basis and can easily select from a displayed list, a desired security and certain information and functions associated with the selected security.

Brief Summary Text (11):
To achieve the objects and in accordance with the purpose of the invention embodied and broadly described herein, the present invention includes a method of customizing the displays according to this invention that operates in a data processing system providing a user an interface with a securities exchange system over which securities are traded. A system display database contains information to be shown in system displays that show information about the securities exchange system. The method comprises the steps, implemented by the data processing system, of: receiving from a user a first input requesting a maintenance display indicating which system display shows information about a desired security; displaying, in response to the first input, the maintenance display; receiving a second input from the user indicating a change in the system display that shows the information about the desired security; and updating the system display database to reflect the changes indicated by the second input.

Brief Summary Text (12):
Another method according to this invention of providing information on a desired security uses a data processing system providing a user interface with a securities exchange system for trading securities. The users trade securities that have an associated set of information. The method comprises the steps, implemented by the data processing system, of: receiving, from a user a first input requesting a display for the desired security, the display containing a predetermined subset of information selected from the set of information associated with the desired security; displaying the display containing a predetermined subset of information for the desired security; receiving a second input from the user specifying a trade of the desired security; executing the trade; and reporting the trade to the securities exchange system.

Brief Summary Text (13):
Yet another method of providing information on selected securities according to this invention also operates in a data processing system providing an interface with a securities exchange system for trading securities in which users trade securities according to offers and bids. The method comprises the steps, implemented by the data processing system, of: receiving from a user a first input requesting a ticker display containing information associated with a selected set of securities; displaying the ticker display; scrolling the selected information across the ticker display in a predetermined scroll direction; receiving from a user a second input changing the information associated with the selected set of securities; and scrolling the changed selected information.

Detailed Description Text (43):
After selecting button 4055, a mark in circle 4051 identifies the user as a Market Maker and a mark in circle 4053 identifies the user as an Order Entry Firm. A user can determine the defaults for the status and circles 4051 or 4053 using the Dynamic Quote Setup window described below. Selecting Clear button 4058 deletes all information in text box 4056 and resets circles 4051 and 4053 to their default

values.

Detailed Description Text (59):
The user selects button 5046 to set the default type to Marker Maker, and selects button 5047 to set the default type to an Order Entry Firm. To insure that the values become defaults, the user must select Save button 5050. Otherwise the system uses the default values of Quick Order, SelectNet, and Market Maker. The user may also select Open button 5052 which causes the software to save the values as defaults and then open a Dynamic Quote window 4000.

Detailed Description Text (70):
Selecting Decline button 6070 allows the user to decline a preferential order. A preferential order is an order directed to a Market Maker in a particular issue. A preferential order sent at the Market Maker's quote may create liability because the Market Maker may have to execute some portion of the order.

Detailed Description Text (72):
The Dynamic Quote Plus setup window 7000 shown in FIG. 7 operates similar to the setup window Dynamic Quote setup window 5000 but includes an additional box 7010. If the user selects box 7010, the NWII software displays all preferential orders for securities in text box 6010. The default for this option is not to display preferential orders for all securities.

Detailed Description Text (81):
In box 9050, Setup Window 9000 also allows the user to set certain default values for the selected Quick Quote window 8000. The user may use buttons 9052 and 9053 to select either QuickOrder or QuickReport, respectively, as a default state. The user may also use buttons 9055 and 9056 to select a small order execution service or SelectNet, respectively. The user selects button 9058 to set the default type for the selected window to Marker Maker, and selects button 9059 to set the default type to an Order Entry Firm. If the user does not select button 9060, quick entry functions are not enabled.

CLAIMS:

1. A method for customizing a display in a data processing system over which securities are traded, comprising:

providing an interface with a securities exchange system over which securities are traded, wherein a system display database contains information about the security exchange system;

receiving a first input from a user requesting a maintenance display indicating which of a plurality of system monitors display information about a desired security;

displaying the maintenance display in response to the first input;

receiving a second input from the user indicating a change in which of the plurality of system monitors display information about the desired security;

updating the system display database to reflect the changes indicated by the second input;

displaying transaction information about the desired security;

receiving a third input from the user indicating changes to the transaction information regarding the desired security;

updating the system display database according to the third input;

altering the maintenance display according to the third input;

displaying information about a Tick Size for the desired security;

receiving a fourth input from the user to change the Tick Size of the desired security; and

updating the system display to reflect the change indicated by the fourth input.

3. The method according to claim 1, further comprising:

receiving a fifth input from the user representing the desired security being traded

on the securities exchange system; and

displaying pre-selected information about the desired security in response to the fifth input.

5. A method for customizing a display in a data processing system over which securities are traded, comprising:

providing an interface with a securities exchange system over which securities are traded, wherein a system display database contains information about the security exchange system;

receiving a first input from a user requesting a maintenance display indicating which of a plurality of system monitors display information about a desired security;

displaying the maintenance display in response to the first input;

receiving a second input from the user indicating a change in which of the plurality of system monitors display information about the desired security;

updating the system display database to reflect the changes indicated by the second input;

displaying transaction information about the desired security;

receiving a third input indicating changes to the transaction information regarding the desired security;

updating the system display database according to the third input;

altering the maintenance display according to the third input;

displaying an indication of a user's authorization to use an automated ordering service for the desired security; and

displaying, if the user is authorized to use the automated ordering service, information about the Tick Size of the desired security for the automated ordering service.

7. A method of providing information on a desired security, comprising:

providing a user interface with a securities exchange system for trading securities, wherein a plurality of users trade securities each security having an associated set of information;

receiving a first input from the user requesting a dynamic display for the desired security, the dynamic display containing a subset of information selected using a setup display for customizing the subset of information in the dynamic display from the set of information associated with the desired security;

displaying the dynamic display containing the subset of information for the desired security;

receiving a second input from the user specifying a trade of the desired security;

executing the trade;

reporting the trade to the securities exchange system; and

wherein displaying the dynamic display further comprises:

displaying a Tick Size for the desired security;

receiving a third input from the user indicating a change in a bid and an offer by the user for the desired security by the Tick Size;

transmitting the change in the bid or offer to the securities exchange system; and

changing the display to reflect the change in the bid and the offer by the Tick Size.

9. The method according to claim 8 wherein a bid market depth is a number of market

makers making bids on t desired security, a market mak being a trading firm registered with the securities exchange system to trade the desired security, and an offer market depth is a number of market makers making offers on the desired security, and

wherein displaying the dynamic display further comprises:

displaying the bid market depth and the offer market depth for the desired security.

10. The method according to claim 8, wherein a market maker is a trading firm registered with the securities exchange system to trade the desired security according to a market maker offer and a market maker bid, and

wherein displaying the dynamic display further comprises:

displaying a user offer and a user bid.

12. The method according to claim 7, wherein securities are traded using bids, representing how much money the user will pay for the desired security, and the associated set of information includes the bids associated with the desired security, and displaying the dynamic display further comprises:

allowing the user to obtain a display of the bids associated with the desired security.

13. The method according to claim 7, wherein securities are traded using bids, representing how much money the user will pay for a security, and offers, representing how much money a user will accept for the desired security, wherein the associated set of information includes bids and offers associated with the desired security, and displaying the display further comprises:

allowing the user to obtain a display of the bids and the offers associated with the desired security.

14. The method according to claim 7, wherein securities are traded using offers, representing how much money a user will accept for the desired security, and wherein the associated set of information includes the offers associated with the desired security, and displaying the dynamic display further comprises:

allowing the user to obtain a display of the offers associated with the desired security.

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L9: Entry 5 of 5 File: USPT Jun 12, 2001

US-PAT-NO: 6247000
DOCUMENT-IDENTIFIER: US 6247000 B1

TITLE: Method and system for confirmation and settlement for financial transactions matching

DATE-ISSUED: June 12, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hawkins; John G.	Westfield	NJ		
Jacobs; Dave M.	Wayne	NJ		
Fitzpatrick; Rick	Rockaway	NJ		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Crossmar, Inc.					02

APPL-NO: 09/ 097695 [PALM]
DATE FILED: June 16, 1998

PARENT-CASE:
CROSS-REFERENCE TO RELATED APPLICATION This application is a Continuation-in-Part (CIP) of Applicant's application titled METHOD AND APPARATUS FOR TRADING SECURITIES ELECTRONICALLY having U.S. Ser. No. 08/700,836 filed Aug. 21, 1996, now U.S. Pat. No. 6,029,146. This application also claims the benefit of U.S. Provisional Application No. 60/049,851, titled "IMPROVED METHOD AND SYSTEM FOR TRADING", filed Jun. 17, 1997. Applicant's pending application titled MESSAGE AGENT SERVER having U.S. Ser. No. 60/050,422 filed Jun. 5, 1997, and applicant's application titled METHOD AND SYSTEM FOR PERFORMING AUTOMATED FINANCIAL TRANSACTIONS INVOLVING FOREIGN CURRENCIES having U.S. Ser. No. 08/727,786 filed Oct. 8, 1996, now U.S. Pat. No. 5,787,402 are hereby incorporated by reference.

INT-CL: [07] G06 F 17/60

US-CL-ISSUED: 705/37
US-CL-CURRENT: 705/37

FIELD-OF-SEARCH: 705/37, 705/35, 705/39, 705/36, 705/40

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected | Search ALL

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐	4346442	August 1982	Musmanno	705/36
☐	4376978	March 1983	Musmanno	705/36
☐	4571463	February 1986	Shefler	379/355
☐	4674044	June 1987	Kalmus et al.	705/37
☐	4694397	September 1987	Grant et al.	705/35
☐	4774663	September 1988	Musmanno et al.	705/36
☐	4823265	April 1989	Nelson	705/35
☐	4903201	February 1990	Wagner	705/37
☐	4949248	August 1990	Caro	705/37
☐	4980826	December 1990	Wagner	705/37
☐	5038284	August 1991	Kramer	705/37
☐	5077665	December 1991	Silverman et al.	705/37
☐	5101353	March 1992	Lupien et al.	705/37
☐	5136501	August 1992	Silverman et al.	705/37
☐	5220501	June 1993	Lawlor et al.	705/40
☐	5262942	November 1993	Earle	705/37
☐	5285383	February 1994	Lindsey et al.	705/37
☐	5424938	June 1995	Wagner et al.	705/42
☐	5497317	March 1996	Hawkins et al.	705/37
☐	5517406	May 1996	Harris et al.	705/37
☐	5727165	March 1998	Ordish et al.	705/37
☐	5787402	July 1998	Potter et al.	705/37
☐	5832462	November 1998	Midorikawa et al.	705/35
☐	5845266	December 1998	Lupien et al.	705/37
☐	5924082	July 1999	Silverman et al.	705/37
☐	5950176	September 1999	Keiser et al.	705/37
☐	5963923	October 1999	Garber	705/37

FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
0434224 A2	June 1991	EP	

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Jones, David, "New Year Initiatives on Securities Automation", Financial Technology International Bulletin, vol. 10, No. 5, p. 1-3, Jan. 1993.*
The Depository Trust Company, "Institutional Delivery (ID) System Functional Design Paper for Enhanced, Interactive Capabilities", Mar. 31, 1993.*
Essinger, James, "Special Report--Electronic Trade Confirmation: A Review of Progress Made to Date", Financial Technology Insight Sep. 1993.*
The Depository Trust Company, "Institutional Delivery System User Manual", 1994.*
"Fund Managers Signing Up With Swift Want Straight-Through-Processing", Flnancial Technology International Bulletin, vol. 12, No. 2, p. 8-9, Oct. 1994.*
"ACT and London Stock Exchange Build Gateway", Financial Technology Insight, Oct. 1994, Dialog File 636:Newsletter DB.*
"London Stock Exchange: New Sequal Gateway Goes Live", M2 Presswire, Mar. 8, 1996, Dialog File 636:Newsletter DB.*
Coffey, Brendan, "Sequal Gets Mixed Reviews", Wall Street & Technology, vol. 14, No. 11, p. 44-48, Nov. 1996.*
International Search Report dated Oct. 19, 1998.
Preliminary Search Report date Jan. 18, 2000, published by the PCT International Preliminary Examining Authority.

Forefront, Global Custodian Magazine, Winter 1995.

ART-UNIT: 211

PRIMARY-EXAMINER: Trammell; James P.

ASSISTANT-EXAMINER: Hayes; John W.

ABSTRACT:

The present invention, an embodiment of which is known as Crossmar Matching Service (CMS) provides a method and system for matching order routing of securities and other instrument types, and for matching other transaction information on a post-execution basis, such as during the confirmation and settlement phase. The functions of the present invention occur on the post-execution side of the value chain and include matching the financials, matching the delivery instructions, and confirming those deliveries and instructions. The method and system of the present invention thus further provide a confirmation and settlement system for these functions.

35 Claims, 43 Drawing figures

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L3: Entry 1 of 2 File: USPT Jan 21, 1986

US-PAT-NO: 4566066
DOCUMENT-IDENTIFIER: US 4566066 A

TITLE: Securities valuation system

DATE-ISSUED: January 21, 1986

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Towers; Frederic C.	Bethesda	MD	20034	

DISCLAIMER DATE: 19990608

APPL-NO: 06/ 385323 [PALM]
DATE FILED: June 4, 1982

PARENT-CASE:
CROSS-REFERENCE TO RELATED APPLICATION This invention is disclosed in a co-pending application, of which this application is a continuation, entitled, "Securities Valuation System, Ser. No. 279,781, filed Aug. 11, 1972, and issued as U.S. Pat. No. 4,334,270 on June 8, 1982.

INT-CL: [04] G06F 15/21

US-CL-ISSUED: 364/408
US-CL-CURRENT: 705/36

FIELD-OF-SEARCH: 364/408, 364/9MSFile

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected | Search ALL

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐	4064490	December 1977	Nagel	358/141 X
☐	4334270	June 1982	Towers	364/300

FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
1447238	August 1976	GB	

OTHER PUBLICATIONS

Minker, J. et al., "File Organization and Data Management," Annual Review of Information Science & Technology, vol. 2, 1967, 123-160.

ART-UNIT: 236

PRIMARY-EXAMINER: Smith; Jerry

ASSISTANT-EXAMINER: Jablon; Clark A.

ABSTRACT:

This discloses a system operating on a general purpose digital computer which produces securities portfolio valuation schedules for multiple simultaneous users. The computer maintains securities information in system-wide files which are updated, both electronically and manually, on a daily basis. The system permits each user to store information about his portfolios, as well as information about supplemental securities not contained in the system-wide files.

1 Claims, 1 Drawing figures

End of Result Set

L9: Entry 5 of 5 File: USPT Jun 12, 2001

DOCUMENT-IDENTIFIER: US 6247000 B1
TITLE: Method and system for confirmation and settlement for financial transactions matching

Brief Summary Text (8):
Systems exist that permit securities traders to communicate electronically with each other. Each of these systems require the investor's clearing agent to manually pre-match a settlement instruction with the executing broker. Currently, there are no products that can effectively automate the trading confirmation process between brokers.

Brief Summary Text (12):
U.S. Pat. No. 5,497,317 discloses a device and method for improving the speed and reliability of security trade settlements, in which trade settlement information is communicated securely between institutional investors, brokers, and custodians. As defined in this patent, institutional investors consist of retirement and pension finds, mutual fund companies, investment advisors, insurance companies and other investors, which manage and trade for two or more accounts. Custodian is defined as a bank, security depository or other settlement agent. Delivery instructions are stored in database in a format compatible with both Industry Users Group (IUG) and Industry Standardization for Institutional Trade Communication (ISITC) standards. Communication links exist between security trading participants and a central database (which actually consists of two separate databases), and between the participants themselves for exchanging messages (e.g., electronic mail not relating to settlement of a particular trade). Communications links between institutions and brokers are utilized immediately after trade execution to settle the trade. Similarly, trade settlement communications links exist between institutions and custodians. Brokers and custodians input delivery instructions to a delivery database along respective lines. The delivery instructions include information such as the country of origin of the security, the security type, and clearing method details. As delivery instruction sets are added to or modified on the delivery database, alert messages are generated by a central database for communication to the other brokers and custodians; these alert messages inform the brokers and custodians of the delivery instruction changes. The central database includes a wire or wireless transceiver for receiving information for storage and retrieval requests, and for transmitting alerts and retrieved information. Account information includes a custodian identifier for retrieval from the delivery database of the delivery instructions corresponding to the specified custodian identifier. Account information and the retrieved, specified custodian delivery instructions are combined for storage in an account database. A broker internal account number (BIA)/account identifier table is stored in the account database for use by the central database to generate alert messages for transmission to brokers informing them of changes in account information for BIAs cross-referenced to the account information. The changes may be to either the custodian delivery instruction portion or the account portion of account information. Information retrieved from the central database for use in settling security trades is very accurate since each participant enters information on databases pertaining to it and since alert messages permit affected participants to review changes made to the databases in real time.

Brief Summary Text (13):
In this system, storing custodian delivery instructions in both the delivery database and the account database serves several functions. First, it prevents custodians from making changes to the settlement of securities traded for an institutions' account without the institutions' consent. Second, it permits more rapid retrieval and transmission of security settlement information from the institutions to the brokers since only a single database needs to be accessed.

Detailed Description Text (97):

FIG. 19 contains information on various elements of the example trade blotter screen 220a of FIG. 18. As shown in FIG. 19, the various elements of the trade blotter screen 220a include buy/sell indicator, ordering broker, financial instrument, executing broker, quantity, message color, matched status, and message status. With regard to message color (background of section), yellow indicates unmatched, blue indicates matched, red indicates canceled, and gray indicates active on screen. With regard to matched status, "U" indicates unmatched, "M" indicates matched, and "C" indicates canceled. With regard to message status, "S" indicates send and "R" indicates read.

Detailed Description Text (159):
"Attribute" further defines the financial instrument by specifying an attribute. In relation to attribute, a code word may be selected from the following: 1) CFI--the ISO classification of the financial instrument code followed by the six digit code; 2) CPD--the next coupon date followed by a date in a YYYYMMDD form; 3) CPN--the next coupon number followed by the number; 4) CTN--certificate numbers followed by the code MSG579 (meaning an MT579 will follow); 5) CUP--Covered or Uncovered Position Indicator followed by C for covered or U for Uncovered; 6) MDC--maturity date of the contract; 7) MDD--maturity date of the debt instrument followed by the date in the YYYYMMDD form; 8) MSC--other attribute followed by a short description; 9) OPS--option style followed by A for American or E for European; 10) OPT--option type followed by P for put option or C for call option; 11) SKP--strike price followed by the strike price; 12) VNO--version number of the contract of tranches followed by the number.

Detailed Description Text (162):
"Buy/sell indicator" is used to specify if an order or execution is to buy or sell. "Charge narrative" is used to further explain the charges in charges dialogue box.

Detailed Description Text (167):
"Conditions" specifies an additional transaction or trade condition. One of the following code words may be selected with regard to conditions: 1) AIB--accrued interest calculation basis; 2) BLK--block order; 3) BST--best confirmation price indicator, followed by a Y for yes or an N for no; 4) CBK--commission sharing broker; 5) CBN--trade executed cum bonus; 6) CCP--trade executed cum coupon; 7) CDV--trade executed cum dividend; 8) CRS--cross trade indicator, followed by a Y for yes or an N for no; 9) CSA--commission sharing agent; 10) CSB--commission sharing basis; 11) FRC--free clean settlement; 12) GDL--trade executed with guarantee delivery; 13) MSC--miscellaneous; 14) NTP--net price; 15) POS--position; 16) SDL--trade executed with a special delivery; 17) SDT--requested settlement date; 18) SEM--trade executed by a stock exchange member; 19) SLC--trade executed in a special location; 20) SRO--trade executed under rules of the self regulatory organization; 21) XBN--trade executed ex bonus.; 22) XCP--trade executed ex coupon; and 23) XDV--trade executed ex dividend.

Detailed Description Text (180):
"Price Limit" specifies the currency, price limit and code identifying the type of order. The field includes an ISO currency code, a price and a price limit code.

Detailed Description Text (181):
"Price Limit Codes" are codes used to buy or sell orders, and include the following: AON--all or none; BCE--buy contra short exempt; BCS--buy contra short; BMI--buy minus; CAR--carefully; COM--combination order; DNI--do not increase; DNR--do not reduce; DSC--discretionary; FOK--fill or kill; LMT--limit order; LWO--limit with or without a round lot sale; MIT--market until touched; MKT--at the market; MNH--market not held; MSC--miscellaneous; NHD--not held; ORL--order lie; SEI--sell short exempt; SLO--stop loss; SPS--sell plus; SSI--sell short; STL--stop limit; and STP--stop order.

Detailed Description Text (182):
"Price limit qualifier" is used to specify whether the price limit used in the price limit filed and or the stop price is a discount or premium amount or a par value. The following code words may be selected: CEN--the price or stop limit is less than a dollar; DIS--the price or stop price limit is a discount amount or percentage relative to the issue price; PAR--the price or stop price limit is a par value or equal to the nominal or face value of the instrument; and PRE--the price or stop price limit is a premium amount or percentage relative to the issue price.

Detailed Description Text (189):
"Routing indicator" indicates whether the order is to be routed to an order routing application or to a specific party. The following code words may be selected: AOR--used to direct an order to an automatic order routing service; and ATT--used to direct the order to attention of a specific party.

Detailed Description Text (196):
"Standing instructions override indicator" when checked indicates that standing instructions contained in the standing instructions database are to be overridden.

Detailed Description Text (198):
"Stop price" is used when a price limit has been specified in the Price Limit field. The following code words may be selected: PCT--followed by the percentage price; REN--followed by a revenue amount; and YLD--followed by a yield price.

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L16: Entry 31 of 32 File: USPT Jan 9, 2001

US-PAT-NO: 6173270
DOCUMENT-IDENTIFIER: US 6173270 B1

TITLE: Stock option control and exercise system

DATE-ISSUED: January 9, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Cristofich; John	Bridgewater	NJ		
Warner; Susan	Hamilton	NJ		
Howard; Deborah	Jackson	NJ		
Berkley; Karen	Franklin Park	NJ		
Radcliffe; Eric	Kendall Park	NJ		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Merrill Lynch, Pierce, Fenner & Smith	New York	NY			02

APPL-NO: 08/ 935709 [PALM]
DATE FILED: September 23, 1997

PARENT-CASE:
This application is a continuation-in-part of application Ser. No. 08/487,902, filed Jun. 7, 1995, now U.S. Pat No. 5,671,363, and application Ser. No. 938,939, filed Sep. 1, 1992, now abandoned (the disclosures of which are incorporated herein by reference).

INT-CL: [07] G06 F 17/60

US-CL-ISSUED: 705/37
US-CL-CURRENT: 705/37

FIELD-OF-SEARCH: 705/37, 705/35, 705/36, 705/39

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected Search ALL

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐	4346442	August 1982	Musmanno	
☐	4376978	March 1983	Musmanno	
☐	4674044	June 1987	Kalmus et al.	705/37
☐	4815741	March 1989	Small	463/17
☐	5077665	December 1991	Silverman et al.	705/37
☐	5126936	June 1992	Champion et al.	
☐	5270922	December 1993	Higgins	
☐	5297032	March 1994	Trojan et al.	
☐	5315634	May 1994	Tanka et al.	455/31.2
☐	5597046	January 1997	Musmanno et al.	
☐	5671363	September 1997	Cristofich et al.	705/37
☐	5710889	January 1998	Clark et al.	345/344
☐	5765144	June 1998	Larche et al.	
☐	5781654	July 1998	Carney	
☐	5826243	October 1998	Musmanno et al.	
☐	5890141	March 1999	Carrey et al.	

FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
EP0416482A2	November 1991	EP	

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E Trade stock System On Web, Lowers Commissions, E Trade Securities Launches Internet Stock and options trading system, Newsbytes News Network, Feb. 1996.
A connectinist expert system for international currency option trading, Quah, T.S. et al. Nat. Univ. of Singapore, Nov. 1993.
Improved ption pricing using artificial neural networks and bootstrap and mehtods, Labjcygier, P.R. et al. International journal of Neyral Systems, vol. 8 issue:4 pp. 457-71, Aug. 1997.
Approximate option pricing, Chalasani, P. et al., 37th annual symposium Foundations of Computer Science, pp. 244-253, Jan. 1996.
The Electronic Invetor, A Big Edge for little Guys,Three packages give individual options traders some of the tools pros use, Dec. 1995.*
S&P ComStock/optionomics Systems: looking to the future with sound options risk analysis, Future,v22, n7, p28, 1993.*
Database and the Internet--Businesses flock to put live corporate, Martin Marshall, Communication Week, Feb. 1996.*
"Agreement for Services Between PepsiCo, Inc. and Merrill Lynch, Pierce, Fenner & Smith Incorporated dated as of Jul. 1,1990" dated Oct. 31,1990.
"Proposal to Convert Pepsico's Sharepower Plan to Merrill Lynch's Generic Stock Option Plan Administrative System, vol. One, Oct. 7, 1994" of Oct. 7, 1994.

ART-UNIT: 274

PRIMARY-EXAMINER: Trammell; James P.

ASSISTANT-EXAMINER: Retta; Yehdega

ABSTRACT:

A system and method for managing a plurality of stock option accounts each for a plurality of participants. The system invokes a particular option plan defined in the system that governs the transaction choices available to each participants The governing option plans are defined by the sponsoring company in terms of grant, vest and expiration date for the option contracts, and are defined in the system via a database of option holding information for each participant and an axiomatic rule system defining the criteria under which a given participant can exercise given

options under the particular plan. The system implements the plans for multiple client companies providing several distinct modes for option exercise by the participant. The system preferably also allows for disbursement of proceeds in a currency different than that in which the underlying security for the option is traded, real time execution of the option transaction, and/or simulating the outcomes of different manners in which the participant may exercise vested options and the resulting economic outcome (disbursement, taxes, transaction fees).

16 Claims, 7 Drawing figures

L16: Entry 31 of 32 File: USPT Jan 9, 2001

DOCUMENT-IDENTIFIER: US 6173270 B1
TITLE: Stock option control and exercise system

Detailed Description Text (41):
Although the entry of option exercise instructions are made on an individual participant basis, the actual implementation of these transactions is done on a client/security basis, i.e., transactions for a given security are accumulated so that the actual trade order that reaches the exchange comprises many individual orders combined. The method of accumulation is not critical and may proceed by either a set time period or by volume of transactions in given securities.

Detailed Description Text (45):
In another embodiment of this invention, it is preferably contemplated that a participant engages the system and exercises vested options without directly contacting a broker. As such, the participant can access the system on a bulletin board directly via modem, a hypertext page (preferably via secure server protocol) on the web portion of the internet, or a menu system via touch-tone telephone as mentioned above. The participant would be required to enter account information and one or more passwords (e.g., a PIN, a personal identification number). Thereafter, the participant enters, for example, information indicative of the particular options to be exercised and, optionally, trading, currency, and/or proceed distribution instructions. For example, the participant can direct the system to exercise specified options only if the price of the underlying security were not less than a given price. Likewise, the participant could direct that the proceeds be distributed in a particular currency, as described above; and that they be wired, mailed, or directly deposited with a specified institution. Further, the VRS preferably responds in a default language (e.g., English, or a language as determined by the plan level rules) particular to the participant, and/or the participant can be presented with a menu prompting for entry of the language in which the participant would like to continue the session. Languages presently preferred for implementing in this system include English, Spanish, German, French, Italian, Portuguese, Dutch, Mandarin (Chinese), Japanese, Tagalog (Phillipines), and Malay (Malaysia); other languages can be used or implemented as a particular plan or administrator requires. Similarly, a web site can allow the participant to continue their session on web pages with their particularly preferred language.

Detailed Description Text (47):
In yet another embodiment, the invention contemplates the real time execution of option exercise, as described in U.S. Pat. No. 4,674,044, entitled "Automated Securities Trading System" (the disclosure of which is incorporated herein by reference). In that system, trades to be executed are collected at the end of the day and processed for a single block trade the following trading day. In the present invention, such a system could have undesirable consequences because one or more such large trades could provide sufficient market pressure to change the price of the underlying security, most likely decreasing its price. When options are executed by insiders, the required disclosure of such exercises, coupled with changes in the underlying security price, could have a number of detriments. Accordingly, it is desirable to allow the plan participant to exercise her options in real time under the present system. With reference to FIG. 6, assuming, for example, that the participant calls in by telephone, the participant ("user" in the Figure) starts 601 by calling a predefined telephone number and navigates through various menu options using the touch tone phone keys using known technology (the Voice Response System, "VRS", mentioned above). The user enters her account number 603 which is verified 605 by the system. The user then enters her PIN at 607. The system verifies the users PIN 609 and decides whether real time trading is an election within the plan 611 by reference to the plan level rules. If real time processing is permitted, the user enters her desired order for the options to be exercised 613 (e.g., number of options to be exercised and type of exercise for all or groups thereof) and the order is processed 615. If real time trading is not permitted, the system branches 617 to process the order in a batch mode (e.g., the order will pend on the system

- until it can be processed in the normal course of trading. Continuing with the processing, the older is executed 619 in real time such as in the aforementioned U.S. Pat. No. 4,674,044. Afterwards, the trade is confirmed 621 and the relevant databases are updated 623 to reflect the option exercise, after which this portion of the process terminates 625.

Detailed Description Text (48):
In still another embodiment, the present invention contemplates simulations of the tax consequences of an option exercise, especially in combination with the present invention. Income to a plan participant from the exercise of options is likely taxable at the federal, state, and even local levels. To facilitate the participant's decision on how many options should be exercise, and how various options should be exercised (e.g., cashless, exchange, etc.), the invention provides a simulation of the tax consequences of a particular manner of exercising the options. The simulation can be performed at a workstation at which a broker can view/run the simulation and communicate with the participant, or, more preferably, the participant can access the simulation via telephone and use of a menuing system or via modem (e.g., a page on the web poison of the internet, or on a bulletin board by direct modem connection). By performing one or more simulations with different parameters, the participant can better decide how the options should be exercised. In an embodiment of such a simulation, the participant first specifies the number of options to be exercised. The Net Shares of stock required for the exercise of the options is determined by:

Detailed Description Text (77):
A screen accessible to the broker or to the participant (e.g., on the web portion of the internet) would preferably include the following fields:

Other Reference Publication (1):
E Trade stock System On Web, Lowers Commissions, E Trade Securities Launches Internet Stock and options trading system, Newsbytes News Network, Feb. 1996.

Other Reference Publication (7):
Database and the Internet--Businesses flock to put live corporate, Martin Marshall, Communication Week, Feb. 1996.*

WEST

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L16: Entry 29 of 32 File: USPT Jan 7, 2003

US-PAT-NO: 6505174
DOCUMENT-IDENTIFIER: US 6505174 B1

TITLE: Computer-implemented securities trading system with a virtual specialist function

DATE-ISSUED: January 7, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Keiser; Timothy M.	Los Angeles	CA		
Burns; Michael R.	Los Angeles	CA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
HSX, Inc.	Santa Monica	CA			02

APPL-NO: 09/ 184571 [PALM]
DATE FILED: November 2, 1998

PARENT-CASE:
This application is a continuation-in-part of U.S. application Ser. No. 08/620,906, filed Mar. 25, 1996, now U.S. Pat. No. 5,950,176.

INT-CL: [07] G06 F 17/60

US-CL-ISSUED: 705/37; 705/35, 705/36, 705/1
US-CL-CURRENT: 705/37; 705/1, 705/35, 705/36

FIELD-OF-SEARCH: 705/37, 705/36, 705/35, 705/1

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected Search ALL

	PAT-NO	ISSU ATE	PATENTEE-NAME	US-CL
☐	3581072	May 1971	Nymeyer	705/37
☐	4412287	October 1983	Braddock, III	705/37
☐	4674044	June 1987	Kalmus et al.	705/37
☐	4823265	April 1989	Nelson	705/35
☐	5077665	December 1991	Silverman et al.	705/37
☐	5101353	March 1992	Lupien et al.	705/37
☐	5136501	August 1992	Silverman et al.	705/37
☐	5497317	March 1996	Hawkins et al.	705/37
☐	5819238	October 1998	Fernholz	705/36
☐	5924082	July 1999	Silverman et al.	705/37
☐	5950176	September 1999	Keiser et al.	705/37
☐	6012046	January 2000	Lupien et al.	705/37
☐	6014643	January 2000	Minton	705/37
☐	6016483	January 2000	Richard et al.	705/37
☐	6029146	February 2000	Hawkins et al.	705/35

FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
3539545	July 1986	DK	
WO 9858333	December 1998	WO	

OTHER PUBLICATIONS

Ye, Jia, "An Investigation of Market Fragmentation and the Specialist's Quotation Strategy (Information Risk, Liquidity, Bid Ask Spread", 1995, vol. 57/03-A of Dissertation Abstracts International, p. 1260. 97 Pages.

ART-UNIT: 3623

PRIMARY-EXAMINER: Choi; Kyle J.

ASSISTANT-EXAMINER: Robinson-Boyce; Akiba

ABSTRACT:

The present invention discloses method, apparatus, and article of manufacture for a computer-implemented financial management system that permits the trading of securities via a network. A server computer receives buy and sell orders for derivative financial instruments from a plurality of client computers. The server computer matches the buy orders to the sell orders and then generates a market price through the use of a virtual specialist program executed by the server computer. The virtual specialist program responds to an imbalance in the matching of the buy and sell orders.

25 Claims, 19 Drawing figures

L16: Entry 29 of 32 File: USPT Jan 7, 2003

DOCUMENT-IDENTIFIER: US 6505174 B1
TITLE: Computer-implemented securities trading system with a virtual specialist function

Abstract Text (1):
The present invention discloses method, apparatus, and article of manufacture for a computer-implemented financial management system that permits the trading of securities via a network. A server computer receives buy and sell orders for derivative financial instruments from a plurality of client computers. The server computer matches the buy orders to the sell orders and then generates a market price through the use of a virtual specialist program executed by the server computer. The virtual specialist program responds to an imbalance in the matching of the buy and sell orders.

Brief Summary Text (8):
For example, most financial markets also employ one or more market makers called "specialists." These specialists fill customer orders from the specialist's inventory position if there are no matches for the customer orders in the open market. In the prior art, the specialist function is not automated, but is performed by a firm or individual. Thus there is a need in the art for an improved computer-implemented trading system that includes an automated specialist function to create a market for the securities traded and to lessen the volatility of smaller securities markets.

Brief Summary Text (17):
Another object of the present invention is to provide a ghost trader for a security in order to generate trading activity so that adjusted market control factors take effect.

Brief Summary Text (20):
To overcome the limitations in the prior art, and to overcome other limitations that will become apparent upon reading and understanding the present specification, the present invention discloses a method, apparatus, and article of manufacture for a computer-implemented financial management system that permits the trading of securities via a network. In accordance with the present invention, a server computer receives buy and sell orders for derivative financial instruments from a plurality of client computers. The server computer matches the buy orders to the sell orders and then generates a market price through the use of a virtual specialist program executed by the server computer. The virtual specialist program responds to an imbalance in the matching of the buy and sell orders.

Brief Summary Text (22):
Users may access the system over a network, using a standard interface. An exemplary system comprises a Web server with an SQL compliant back-end database, with a standardized Web browser interface. Using the Web browser, the user may register for the on-line trading system over a network, providing demographic information, such as age, sex, location, occupation, income, hobby interest, and the like. Once registered, the user is given the option of choosing a unique userID which will be used for logging in after registration. In providing the demographic information, the user also provides an e-mail address to which a randomly assigned password and other instructional information can be forwarded.

Brief Summary Text (23):
Once the user has received a password, the user may freely log in and out of the system over the Web by selecting a start button present on a Web home page for the system. However, while the password is being forwarded to the new user, the new user is given temporary access to the system so that trading can begin instantaneously.

Brief Summary Text (26):
The user may trade security instruments by typing in the symbol for the instrument

for which a purchase is desired in a buy-sell area of the page. A quantity is also specified in the buy sell area. If the user does not know the symbol for a particular instrument, a lookup or search function is provided in another area of the screen using standard graphical user interface (GUI) features such as drop-down list boxes, text search boxes, or slider bar lists. Alternatively, a ticker tape style updating menu at the bottom of the screen displays available instruments with the corresponding instrument prices.

Brief Summary Text (28):
If the user wishes to sell a security instrument, the same procedure is followed, except, a sell button is clicked on in the buy-sell area of the Web page. After confirmation, the market price for the shares sold is added to the user's account, and the shares are made available in the system for fulfilling purchase orders.

Brief Summary Text (35):
Periodically, due to natural popularity of a particular security, or by market manipulation by an individual or groups of traders, the security will realize wild fluctuations in price. This is especially true in a market in which virtual currency is used in a virtual market. Given the special circumstances of the virtual market, the system provides an artificial price control, or braking, mechanism.

Brief Summary Text (37):
Still, the braking mechanism may not be effective enough in either an extreme-bear-or bull market for the security, or the market as a whole. In those instances, a halting mechanism is provided by the system. The halting mechanism acts much in the same way as the braking mechanism. The exception is that a security halt threshold (SHT) constant is compared to the TCPI/TCPD field. If the absolute value of the TCPI/TCPD field value exceeds the SBT, trading is halted for that particular security. A notice appears on screen for a trader who tries to trade the security, informing the user that trading has been halted by the system. Trading for the security may be resumed after an administratively set period of time, or manually through an administration module.

Brief Summary Text (38):
The virtual economy may have a finite amount of capital with which to close arbitrage situations that might arise if the policy of the exchange is different than what is reflected by the prices on the market. The virtual economy is unlike non-virtual economies, which may have an infinite amount of capital. A system administrator is provided a separate control screen where changes to global constants, such as the PSPT, NSPT, SBT, SBI, etc., can be adjusted to affect the market. In effect, the password protected control screen serves as a volatility control module. The volatility control, or ghost trade, module is used to implement and enhance monetary regulations, and the market as a whole. The desired effect is implemented by causing the system to issue buy and sell programs which comprise coordinated, across the board, buying and selling timer intervals. A timer periodically queries the ghost trading table 2014. Each security instrument record in the ghost trading table 2014 is set to cause a trade for an administratively set number of times per trading day. If the timer detects that the time interval between trades for a security has ended, the ghost trading mechanism retrieves a ghost buy probability (GBT) from the ghost trade table 2014. A random trade constant (RTC) is generated by the system. Next, a ghost security buy/sell quantity (GBQ) is retrieved from the ghost trade table 2014. If the GBT is greater than or equal to the RTC, a buy order is placed by the system for the number of shares specified by the GBQ. Otherwise, a sell order is placed for the number of shares specified by the GBQ.

Drawing Description Text (16):
FIG. 13 is a flow diagram illustrating the logic of a security trade fulfillment and security price setting program of the second embodiment of the present invention;

Detailed Description Text (11):
With reference to FIG. 1, a block diagram illustrates an exemplary hardware environment for the preferred embodiments of the present invention. More particularly, a typical distributed computer system is illustrated, which uses the Internet 10 to connect client computers 12 executing for example, Web browsers, to server computers 14 executing a computer program embodying the present invention. A typical combination of resources may include client computers 12 that are personal computers or work stations connected via the Internet 10 to server computers 14 that are personal computers, work stations, minicomputers, or mainframes.

Detailed Description Text (44):
In the first preferred embodiment, since the virtual specialist program portfolio initially includes half of all the securities traded, the server computer 14 could eventually deplete the virtual specialist program portfolio or cause the virtual

specialist program por lio to own all the shares of a ock. In order-to maintain a balanced virtual specialist program portfolio, and provide some-liquidity-to the market, the server computer 14 generates additional buy and sell orders to offset orders generated in response to the price movement exceeding the APT. Block 504 represents the server computer 14 generating timed buy and sell orders. In one embodiment of the invention, the server computer 14 assess each stock and each bond in the virtual specialist program portfolio. The server computer 14 determines the deficit or surplus in the item, and then place 1/288.sup.th of the deficit as a "timed recovery order" into each successive 15 minute segment for the next 3 days. When the pricing/trading program 255 matches buy and sell orders as represented by block 320, the pricing/trading program 255 includes any "timed recovery orders" outstanding for the last 3 days in the sweep. These orders are matched with the traders' buy and sell orders. Block 506 represents the end of the virtual specialist program.

Detailed Description Text (55):
With reference to FIG. 1, users may access the system over a network, using a standard interface. An exemplary system comprises a Web client 12 connected to a network such as the Internet 10, which is connected to SQL compliant back-end database servers 14.

Detailed Description Text (56):
With reference to FIG. 8A, a standardized Web browser interface 700 may be used by the user to register with the on-line trading system over Internet 10, providing demographic information, such as first name, last name, age, sex, location, occupation, income, hobby interest, and the like. Once registered, the user is given the option of choosing a unique userID which will be used for logging in after registration. In providing the demographic information, the user also provides an e-mail address to which a randomly assigned password and other instructional information can be forwarded.

Detailed Description Text (57):
With reference to FIG. 8B, once the user is registered, the first time user's default portfolio may be accessed using a temporary password free login by selecting the View Portfolio button 802 in the upper left hand corner of a Welcome Web page 804.

Detailed Description Text (58):
With reference to FIG. 9, after the user has received their permanent password, the system can be accessed over Internet 10 (FIG. 1) using Internet browser 700 by selecting a start button 902 present on a Web home page 804 for the system.

Detailed Description Text (59):
With reference to FIG. 10, the user is presented with their portfolio on Web page 700. Automatically, the new user is provided with a fixed quantity of virtual currency 1002 in virtual dollars (V$) from a reserve bank program, described below, to begin trading with. This quantity can either be considered a loan from the reserve bank program, for which interest is charged, or a gift.

Detailed Description Text (62):
The user may trade security instruments by typing in the symbol 1012 for the instrument for which a purchase is desired in a buy-sell area of page 1010. A quantity 1014 is also specified in buy sell area 1010. If the user does not know the symbol for a particular instrument, a lookup or search function is provided in a symbol search area 1016 of the screen using standard graphical user interface (GUI) features such as drop-down list boxes, text search boxes, or slider bar lists. Alternatively, a ticker tape style updating menu 1018 at the bottom of the screen displays available instruments with the corresponding instrument prices.

Detailed Description Text (86):
With respect to non-bond securities in the second embodiment of the system of the present invention, the virtual specialist program stores a running net movement balance (NMB) representing the quantity of securities for orders that the virtual specialist program fulfills which do not have any offsetting orders. The imbalance is stored as a positive number if the buy-sell imbalance represents more buy trade orders executed than sell orders, or a negative number if the buy-sell imbalance represents more sell orders executed than buy orders.

Detailed Description Text (90):
The NSPT and PSPT constants for the securities are retrieved the security constant table 2002, step 1310. A security price increment (SPI) constant for the security which is the subject of the trade order is retrieved from the security constant table 2002, 1312. The NMB is then compared to the PSPT, step 1314. If the NMB is

greater than the PSPT, [redacted]en the price for the security [redacted] is calculated by adding the SPI to the SP before the trade which was retrieved from a security price table 2002, step 1316. The NMB is then reduced by the PSPT and stored back to the net price movement table 2008, step 1318.

Detailed Description Text (94):
Periodically, due to natural popularity of a particular security, or by market manipulation by an individual or groups of traders, a security may realize wild fluctuations in price. This is especially true in a market in which virtual currency is used in a virtual market. Given the special circumstances of the virtual market, the system provides an artificial price control, or braking, mechanism.

Detailed Description Text (97):
The halting mechanism acts much in the same way as the braking mechanism. The TCPI or TCPD is retrieved for the security which was the subject of the trade order above from the price tracking history table 2020, step 1502. The exception is that a security halt threshold (SHT) constant is compared to the value from TCPI/TCPD field, step 1504. If the TCPI/TCPD field value exceeds the SHT, steps 1506 or 1508, then trading is halted for that particular security, step 1510. A notice appears on screen for a trader who tries to trade the security informing the user that trading has been halted by the system. Trading for the security may be resumed after an administratively set period of time, or manually through an administration module.

Detailed Description Text (99):
For each of certain selected securities, a ghost trading mechanism randomly creates automatic or ghost trades. A ghost trading table 2014 is provided with a timer, which reads the system clock and determines daily time intervals, is included. The system periodically queries the ghost trading table 2014, step 1602. Each security instrument record in the ghost trading table 2014 is set to cause a trade for an administrative set number of times per trading day. If the timer detects that the time interval between trades for a security has ended, step 1604, the ghost trading mechanism retrieves a ghost buy probability (GBT) from the ghost trade table 2014, step 1606. A random trade constant (RTC) is generated by the system, 1608. Next, a ghost security buy/sell quantity (GBQ) is retrieved from the ghost trade table 2014, step 1610. If the GBT is greater than or equal to the RTC, step 1612, a buy order is placed by the system for the number of shares specified by the GBQ, step 1614. Otherwise, a sell order is placed for the number of shares specified by the GBQ, step 1616.

Detailed Description Text (107):
With reference to FIG. 1, the second embodiment of a market research tool is also implemented in the client server environment over Internet 10. Computer 12 is used as a front end for a market research user who wishes to access the system of the present invention to view and download statistical research data which has been compiled and stored on servers 14 from the users' demographic data and trading history.

Detailed Description Text (109):
Upon successful login into the system, the market research user is presented with a list of securities in the system database, step 1704. The market research user may, by use of a mouse or arrow keys, highlight securities for which the user wishes to view or download statistics, step 1706. In order to choose more than one security, the market research user may use a combination of the mouse, arrow keys and shift key. If the shift key is held down during selection, the prior selections made by the user are retained as highlighted selections in combination with the new selection. Selection criteria may also be selected to choose a certain class of securities, or securities which meet, for example, a minimal trading volume threshold over a specified period of time.

Detailed Description Text (110):
After selection of securities, the market research user is given options, on screen, for categories of information which may be obtained, step 1708. Exemplary categories which may be obtained regarding a security or group of securities include: trade volume information, buy vs. sell volume information, timing of volume information, total volume held information, investment concentration information, price information, stop limit order volume information, short sell volume information, and aggregate index information.

Detailed Description Text (114):
With regard to the total volume held for a security, if traders buy a particular security and generally hold on to it for a longer than average period of time, it demonstrates a high degree of faith in the long term performance of a security. For example, if traders tend to invest and hold an actor's star bond, it is probably

because they think she s a long career ahead of her a[redacted] will be popular for more than just one or two films. When the market research user directs the system to obtain total volume held information, the market research tool performs a query on the trade history tracking table 2010 which calculates the average number of shares held for each trader for the requested securities for each trader. The query creates a temporary total volume held answer table for all securities requested. The total volume held answer table contains, for each security, the time that each trader held each security they purchased, along with the volume held.

Detailed Description Text (117):
With regard to stop limit order information, the system of the present invention tracks traders who set the price a security must obtain before a trade order is filled. Stop limit orders are not filled in the event that the market doesn't hit the specified price before the time that the order expires. This functionality gauges traders' sensitivity to a price. For example, if a trader will only buy a movie stock below $30, that may indicate that the trader only perceives a limited upside for the security, and thus believes that the movie will not be an industry blockbuster. When the market research user directs the system to obtain stop limit order information, the market research tool performs a query on the trade history tracking table 2010 to retrieve price per share and volume figures for all requested securities held at any time by all traders which were stop limit orders, whether the limit for such orders were met or not. The query creates a stop limit order answer table for all securities requested. The stop limit order answer table contains, for each security, price per share and volume figures for every stop limit order requested by traders for the requested securities.

Detailed Description Text (118):
With respect to short sell information, if a trader thinks that the value of a security is going to decline, the trader can short sell the security. Analysis of short sell volume on a security can gauge if there is negative sentiment towards the security. When the market research user directs the system to short sell information, the market research tool performs a query on the trade history tracking table 2010 to retrieve short sell volume figures. The query creates a short sell answer table for all securities requested. The short sell answer table contains, for each security requested, the short sale trades orders by all traders.

Detailed Description Text (123):
After display, the user is given the option, by selection button, to download the displayed results and underlying query data, step 1716. If selected, the market research user is allowed to select from a variety of download formats, such as ASCII, xbase, dbf, HTML, tif, gif, bmp, or the like, step 1718. The market research user is allowed to choose a download location on the local client, step 1720. The system then proceeds to compile the data into the chosen format, step, 1722. The data is then transferred, using any one of a variety of protocols such as zmodem, xmodem, ftp, or any one of the OS industry standard protocols, step 1724. In the Web client-server environment, a TCP/IP socket is used.

CLAIMS:

9. The method of claim 2, comprising setting the market price for a plurality of securities after each of a plurality of trade orders are fulfilled.

10. The method of claim 9, comprising storing trade volume information and trade price information for each trade order for the plurality of securities.

22. A method for conducting market research by regulating market price in a computerized trading system, the system receiving buy orders and sell orders for a plurality of securities, the method comprising: computing a plurality of buy-sell imbalances by measuring the imbalances between buy orders and sell orders for the security after fulfilling a plurality of trade orders; computing matching projected price movements for the plurality of trade orders by retrieving a matching plurality of security price thresholds from a database, comparing the matching security price thresholds to the plurality of the buy-sell imbalances, retrieving a plurality of matching security price increments from the database representing matching quantities for price movements for the plurality of instruments, and setting the projected price movements for the plurality of securities to the matching security price increments for the buy-sell imbalances which exceed the matching security price thresholds; and setting market prices for the plurality of securities by incrementing market prices of the securities by the matching projected price movements.

23. The method of claim 22, further comprising: storing a plurality of categories of trade information relating the securities, trade orders and matching market prices;

"receiving a query criteria for requesting statistics for a selected category in a selected security; analyzing the stored categories of trade information in response to the received query; and generating and displaying statistical information for the selected category in the selected security in response to said step of analyzing.